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ABSTRACT

Based upon a review of Connecticut State Labor Department studies, community college enrollment and graduate statistics, and the State Master Plan for Vocational Education, this two-part report examines the vocational education needs within Connecticut and assesses the degree to which the state's community colleges are meeting those needs. After introductory material describing the study design, Part I examines the characteristics and educational objectives of students entering the community colleges in 1979, in terms of their sex, age, reasons for attending a community college, full-/part-time status, and program enrollment. In addition, this section presents the findings of a follow-up survey of 1978-79 graduates, which focused on their employment status, relevance of their job to their major, usefulness of their program of study, and their attitudes toward college services and environments appropriate to vocational education. Part II deals with the statistics which compare average annual employment needs for a labor market area with the number of graduate degrees awarded in individual programs of community colleges serving that area. Finally, recommendations for curriculum considerations are offered based on employment trends revealed in the study. Data tables and a bibliography are included. (JP)

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ED194155

TITLE: TO SURVEY AND CONDUCT A NEEDS ASSESSMENT OF VOCATIONAL STUDENTS AND PROGRAMS IN CONNECTICUT'S COMMUNITY COLLEGE SYSTEM

FINAL REPORT

PREPARED BY: MOHEGAN COMMUNITY COLLEGE
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PREPARED FOR: CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
BUREAU OF VOCATIONAL PROGRAM PLANNING & DEVELOPMENT
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Points of view or opinions stated do not necessarily represent official opinion or policy of state or federal governmental agencies, as the writers are encouraged to express freely their professional judgment in the conduct of the project.

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Preface

It is the purpose of this report to explore the vocational needs of college students enrolled in occupational programs in Connecticut's twelve community colleges. The report interfaces students needs and curriculum, local labor market needs and the state master plan.

The study develops recommendations for the future planning and funding of vocational programs based on research findings and conclusions and the investigation of demographic trends.

Acknowledgement

My sincere thanks to Dr. Kenneth Elterich, Dr. Elaine Stewart and to the members of the Connecticut Labor Department for taking the time to provide the many statistical reports necessary for the preparation of this study. I thank Barry Sheckley, Dean of Community Services at Mohegan Community College for his assistance in editing and for his written contributions to this paper.

Special thanks to Susan Denning who persevered through the seemingly endless retyping and editing.

ABSTRACT

TITLE OF PROJECT: To Survey And Conduct A Needs Assessment of Vocational Students and Programs in Connecticut's Community College System

PROJECT DIRECTOR: Carl Swartz
Associate Professor, Business Administration

APPLICANT ORGANIZATION: Mohegan Community College

FEDERAL FUNDS: $6,000

Beginning Date: July 1, 1979 Ending Date: July 31, 1980

OBJECTIVES: 1) To determine how extensive the need for vocational education is for Community College students in the Connecticut system.

2) To determine the kinds of vocational course work Community College students desire.

3) To investigate the reasons why Community College students have chosen a Vocational Education Program.

4) To determine whether adequate offerings in Vocational Education are available to all who desire them in Community Colleges.

5) To make recommendations on the advisability and availability of Vocational Education curriculums at Community Colleges as they would interface with:

(a) student desires and

(b) local labor market statistics and

(c) the "Master Plan" for Vocational Education

PROJECT DESIGN: Four different sets of source documents were employed to do this study: Connecticut Labor Department Studies, Community College Enrollment & Graduate Statistics, the State Master Plan and "Other" sources of information.

CONTRIBUTION TO EDUCATION: This study assesses the needs and attitudes of students and faculty participating in Vocational Education programs within Connecticut's Community College System. This survey and needs assessment develop a data base of demographic and attitudinal information in relationship to Connecticut's Manpower needs and opportunities. Through this investigative effort, generated findings and recommendations will serve as administrative inputs for future Vocational Education program planning in Connecticut's Community College System.

RECOMMENDATIONS:

1. Immediate consideration be given to increasing the total number of sections offered in Business Administration, Secretarial Science, Marketing.
2. a. That an alternate system, one of self-directed learning, be established for the working student.
   b. That interdisciplinary courses/curriculum which prepare groups of graduates like General Studies and Liberal Arts majors with an exposure to a variety of vocational skills be recommended.
   c. That the granting of credit for experiential learning as a means of prompting students to upgrade their present skills or seek new skills be enacted.
3. It is recommended that a redefinition of the criteria be initiated to measure the relative success of a program.

4. It is recommended that the feasibility study be made to determine if it is possible for the student with a Bachelor degree who might need a couple of occupational courses to get a particular job to be accommodated.
5. It is recommended that the function of a Translator be added to the structure of each Community College System. (Perhaps as a pilot program).
6. That a study be made of the relative effectiveness of the Placement Offices at each community college.
7. That a needs assessment study be initiated to investigate the special precareer and career needs of women.

Introduction

From The Chronicle of Higher Education...

> "As a poetry professor, I used to decry commercialism and implore my students to follow beauty instead, not acknowledging the fact that I could afford indifference to money only because I had a salary...Had the pursuit of pure beauty been something I had had to finance my self, my attitude could never have been the same."[1]

In his article, "Education for Work: Responsibilities and Responses of Two-Year Colleges",[2] S. V. Martorana lists four major responsibilities community colleges have in responding to their localities:

1. To alert students to the local economy's needs for workers skilled and trained in particular fields.

2. To establish and maintain occupational programs that effectively produce the personnel needed in the local economy.

3. To assure that the graduates of such programs learn not only how to do the required work well but what the moral, ethical and social values of their work are.

4. To insure that the graduates understand their general social, civic and cultural roles as well as their economic role.

Given this view of responsibilities and responses, does the evidence available from attitude surveys of graduates point out that Connecticut community colleges have been fulfilling the responsibilities Professor Martorana enumerated in his article?

In the development of this study, it became apparent that the labor markets in our state are changing constantly. During the last five years (1974-1979) we have seen labor market demands fall in the social service/

[1]Carter, Daniel

[2]New Directions For Education and Work, 1, Spring, 1978

public services and increase in the clerical areas, business and professional areas and in the trades. Have community colleges changed as well? Are the programs that have been added in Real Estate, Business Administration, Health Fields, the Technologies and Trades, and others enough to satisfy the changing needs of students? This study carefully documents the interfacing of individual community college vocational programs with present and projected labor market statistics for each community college area served. The study shows the relationship between vocational needs and aspirations of students and the availability of curriculum. When students matriculate in vocational programs it is usually for two reasons: as a means for obtaining a job or to be upgraded in their existing job. Are community colleges meeting these concerns?

The study investigates whether or not there is compliance of the community college system with the mandates of the Connecticut Master Plan for Vocational and Career Education.

While community colleges have made a real effort to meet the individual needs of each student, have they in fact succeeded? Community colleges have served senior citizens, the young, poor, T.V. watchers, military, prisoners, etc. They have had to work with people with a very divergent range of abilities. They have attempted to incorporate life experience, internship programs and such into the development of curriuclum, but is it enough?

SECTION ONE

The objective of this chapter is to determine whether or not the vocational needs of community college students are being met. In order to satisfy this objective, first, a study of the motives of the entering community college class of 1979 was made and second, the 1978-79 Graduate Follow Up survey of Community College Graduates was investigated and broken down by programs (see Table 1). The graduates' attitudes about the relevance of their education in retrospect vis a vis their current employment status and other variables was measured. In addition, the graduates' attitudes toward the vocationally-related services provided by their community college was also measured (see Table 2). (Conclusions appear later in this report).

The programs studied included Child Care, Business, Administration/ Management, Health Care, Public Service, L.A. & G.S. because they are most common.*

A summary of the 1979 entering class of Freshman shows that:[1]

The General Fund enrollment was 29,476 (17,947 FTE)[2], of that number 10,261 (down 4%) were full time students and 19,215 (up 1%) were part timers.

The Extension Fund enrollment was 3,691 (up 18%).

The General Fund data reveals that:

1. Women comprise 65 percent of the total student population.
2. The community colleges enrolled 10,760 new students this fall, up 6 percent over Fall 1978.
3. 31 percent of students have been employed more than 10 years prior to enrolling.

[1]From Facts About Your Community Colleges, 1979.

[2]Full Time Equivalent Student Rate.

*Note: Descriptions of these programs appear in the appendix.

4. Only 25-30 percent enter directly from high school.

5. Minority group enrollment will remain at approximately previous years' levels (12 to 14 percent of total enrollment).

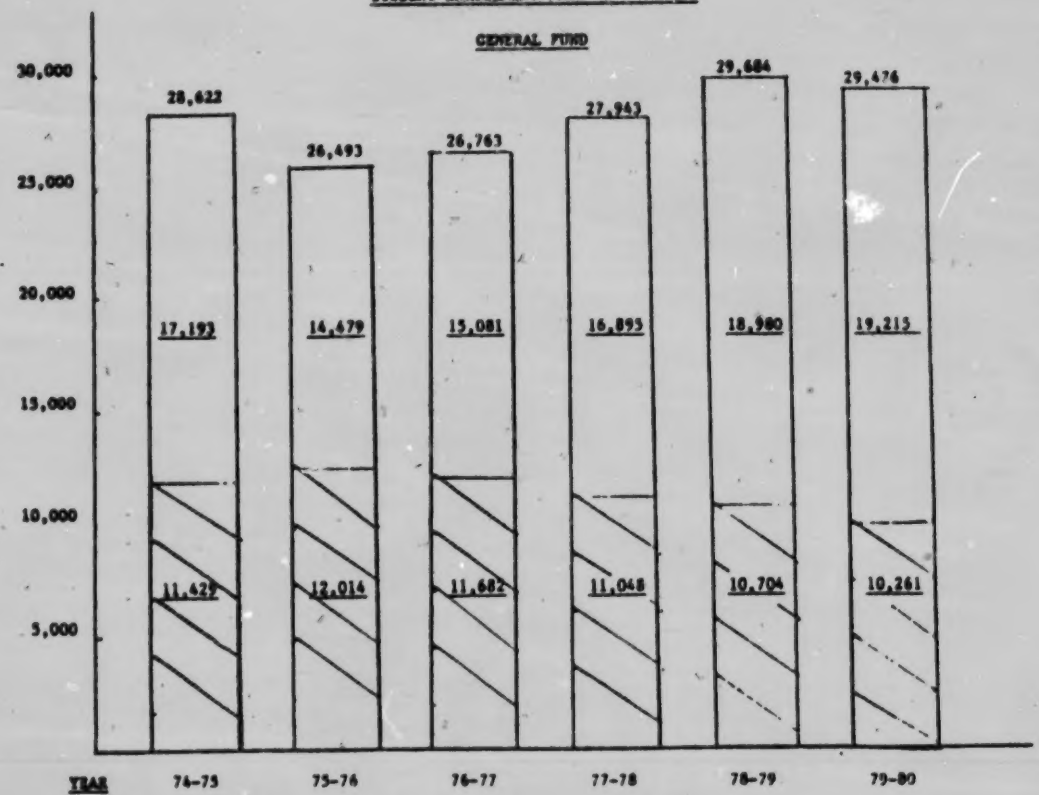
6. Sixty-four percent of our students are age 22 or older.

7. Fourty-four percent of our students are enrolled in occupational areas, 15 percent in non-transfer general preparation courses, 17 percent in arts and science transfer programs, and 24 percent in non-degree status.

8. Of 3,252 associate degrees awarded in June 1978, 1,977 degrees (61%) were in occupational areas, 521 degrees (16%) in arts and science transfer, and 753 degrees in general programs.

General Fund Enrollment.[3] The community colleges enrolled 29,470 General Fund students in the 1979 Fall semester. This total is a slight decrease from the record-setting semester of Fall 1978 when 29,684 students enrolled. Full-time enrollment realized a 4 percent decline from 10,704 to 10,261, whereas part-time enrollment increased 1 percent from 18,980 to 19,215 (see Table 1).[4]

TABLE 1
CONNECTICUT REGIONAL COMMUNITY COLLEGES
STUDENT ENROLLMENT FALL 1974 - 1979
GENERAL FUND



Crosshatching denotes fulltime students.

Enrollment decreases evidenced at several of the colleges can be traced to one or a combination of factors, most notably, the reduced state budget. The budget reductions have curtailed instructional services and staff, curtailed support services, and reduced funds for equipment and supplies.

As a result the colleges have been forced to limit course offerings, particularly upper level courses, which has had a serious effect on students' ability to complete required programs of study. Thus, students have had to either change majors or transfer to other institutions.

In the case of several colleges, poor physical facilities have had a negative impact on student enrollment. Most critical is the situation of Tunxis Community College in which uncertainty over the continued availability of the college's facilities, whether purchased or leased, has led to a growing concern among current and potential students over the future of the college. Other colleges have also been affected by inadequate or "run-down" facilities - Housatonic, Quinebaug Valley, Manchester and Norwalk Community Colleges.

The meager General Fund financing to date of the community service function of the community colleges has limited their ability to respond--compared to the need--in specialized, on-call, job training.

[3]Table and Figure numbers relate only to this reference and should not be included in the total numeralization of this report.

[4]IBID

FIGURE 1[5]

MAIN REASON FOR ATTENDING A COMMUNITY COLLEGE*

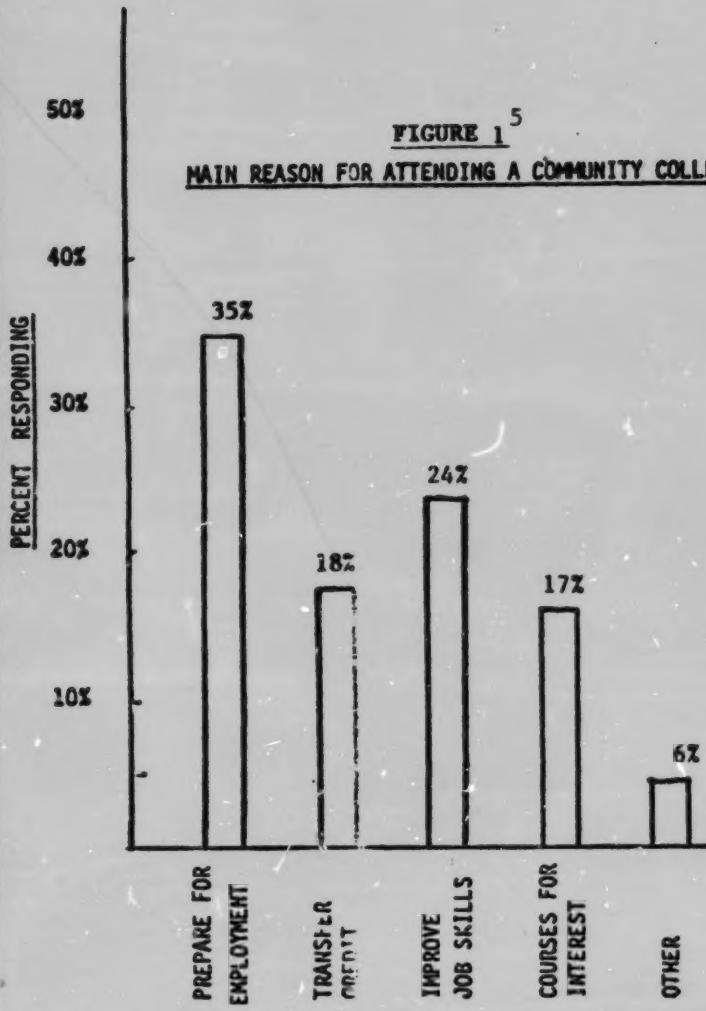
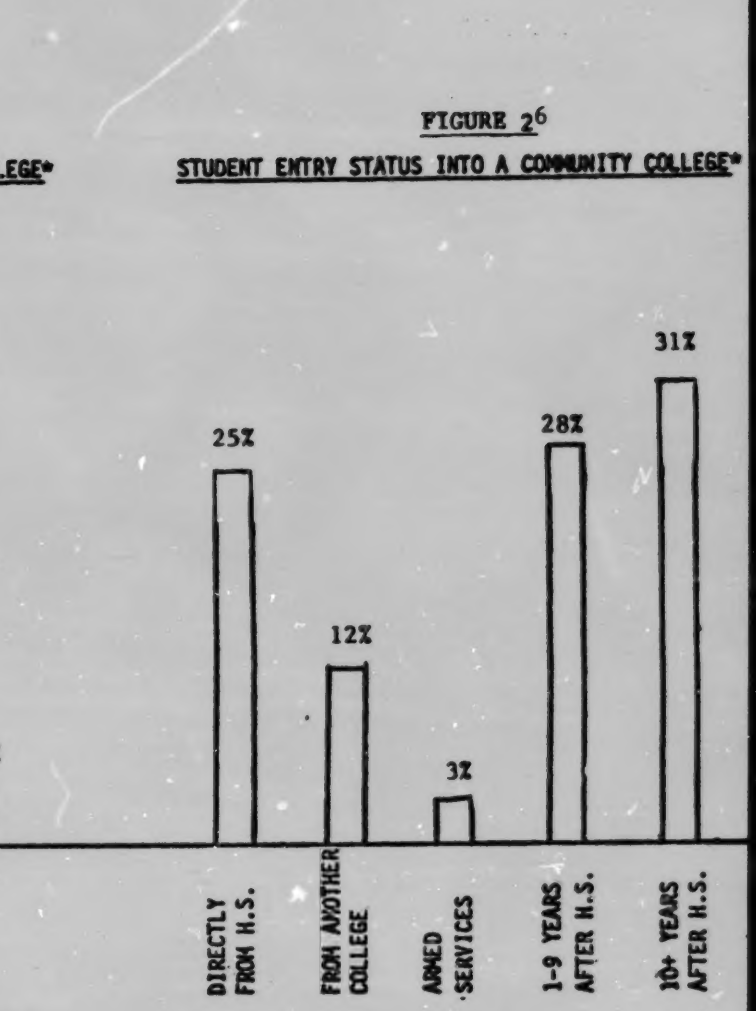


FIGURE 2[6]

STUDENT ENTRY STATUS INTO A COMMUNITY COLLEGE*



* STUDENT QUESTIONNAIRE RESULTS FALL 1979 (9,366)

[5]Table and Figure numbers relate only to this reference and should not be included in the total numeralization of this report.

[6]IBID

Table 2[7]

First Time Students

	Full-time Male	Full-time Female	Part-time Male	Part-time Female	Total
Fall 1978	1,765	2,400	1,922	4,081	10,168
Fall 1979	1,688	2,537	2,033	4,502	10,760

Approximately 25-30 percent of new community college students enter directly from high school (see Figure 1); the projected decline in the number of high school graduates is not as significant for the community colleges as for other public higher education units. Note also, 31 percent were employed more than 10 years prior to entering college and one in ten transferred from another college.

A student survey also revealed that three quarters of community college students are employed while attending college. Further, when asked what was their main reason for attending college, 35 percent of the students responded "To prepare for employment" (see Figure 2), and another 24 percent responded "To improve job skills."

Age Distribution. In 1972, 44 percent of community college students were above the age of 21, this percentage increased to 58 percent in Fall 1976 and has subsequently increased to 64 percent in Fall 1979. Figure 3 illustrates the number and percentage of students in each age category, while Figure 4 provides separate graphs for full-time and part-time students.

If one projects Connecticut's population for various age brackets from 1977 to 1985, it is obvious that the numbers of people in the 25 and older age brackets are increasing. Our studies have indicated that this increasing adult student population, attending primarily on a part-time basis, has turned to the public two-year colleges for instruction in courses which are related to their employment or to general education which may have been neglected in their formal education.

Enrollment by Curriculum. The total Fall 1979 enrollment was distributed among four categories of programs: 44% in occupational areas, 15% in non-transfer general preparation courses, 17% in arts and science transfer programs, and 24% in non-degree status. The vast majority (88%) of the students in non-degree status are part-time students taking courses of special interest, job-related courses, or waiting to enter a degree program. Table 4 provides enrollments for each program offered within the community college system.

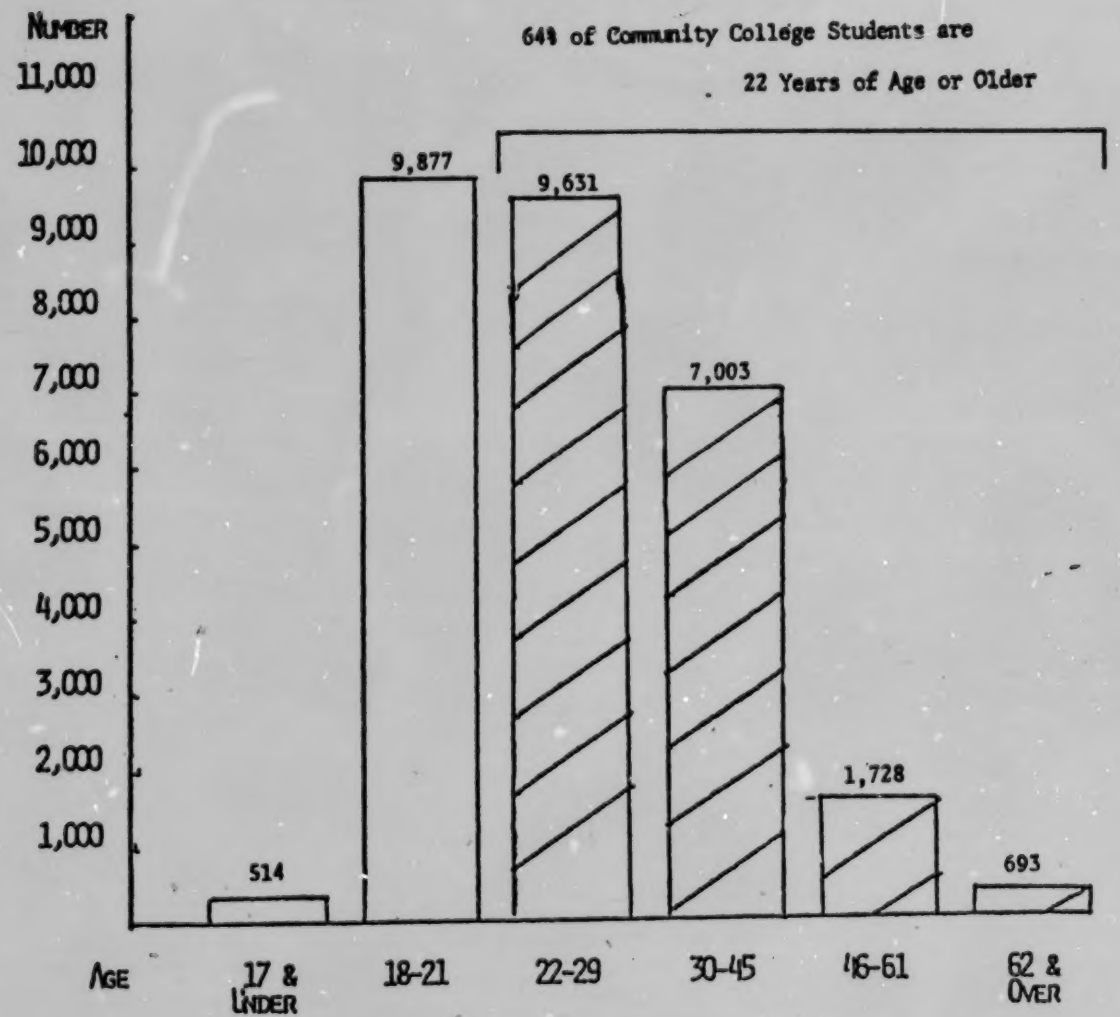
[7] Table and Figure numbers relate only to this reference and should not be included in the total numeralization of this report.

FIGURE 3

CONNECTICUT REGIONAL COMMUNITY COLLEGE[8]

GENERAL FUND

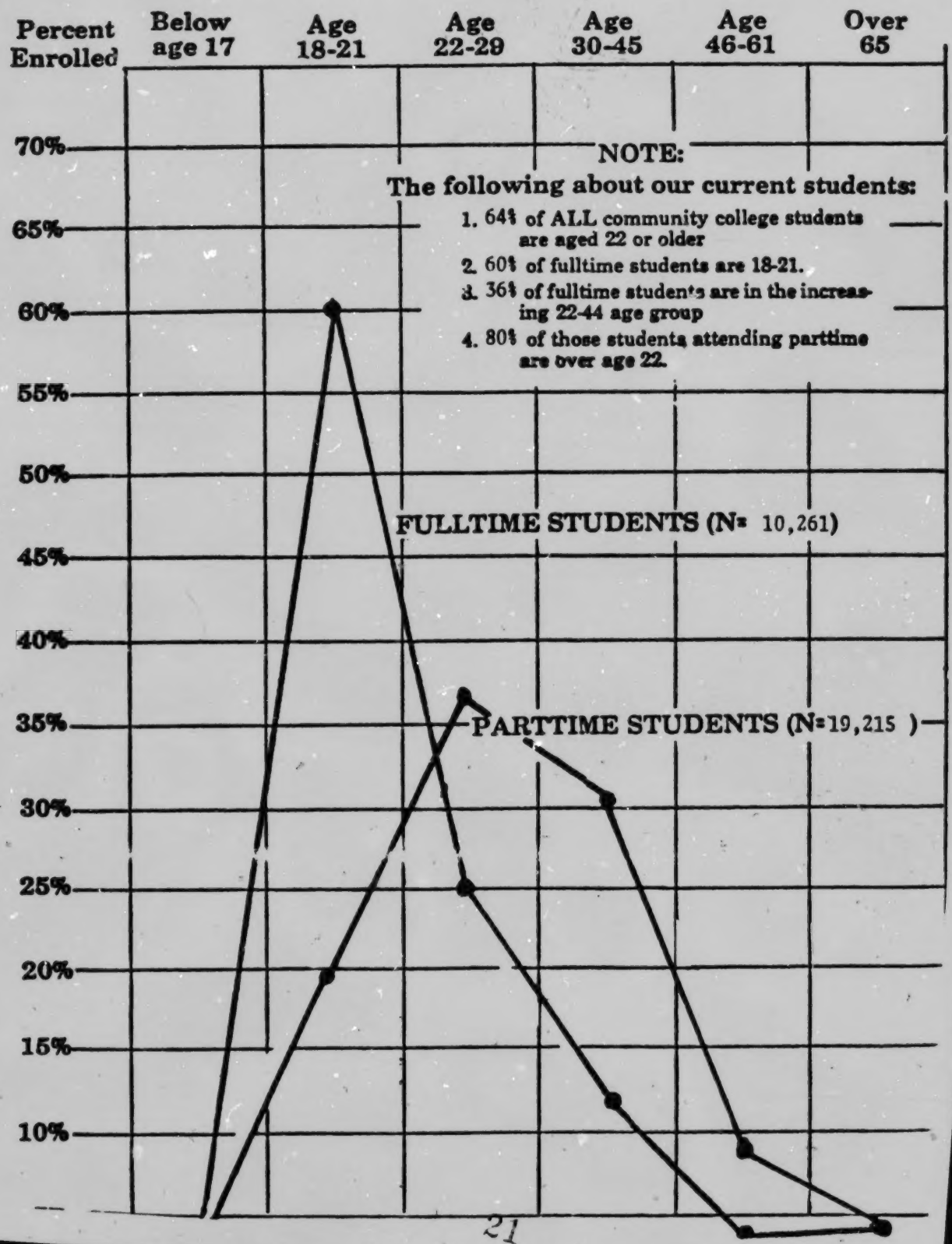
AGE DISTRIBUTION - FALL 1979



[8]Table and Figure numbers relate only to this reference and should not be included in the total numeralization of this report.

FIGURE 4

AGE DISTRIBUTION OF FULLTIME AND PARTTIME COMMUNITY COLLEGE STUDENTS FOR FALL 1979 9



Program Offerings	FRESHMAN FULL-TIME Male	FRESHMAN FULL-TIME Female	FRESHMAN PART-TIME Male	FRESHMAN PART-TIME Female	SOPHOMORE FULL-TIME Male	SOPHOMORE FULL-TIME Female	SOPHOMORE PART-TIME Male	SOPHOMORE PART-TIME Female	Grand Total
PUBLIC SERVICES AND RELATED TECHNOLOGIST (continued)									
Drug and Alcohol Rehabilitation Counselor	7	8	16	23	3	7	8	13	85
Recreation and Leisure Studies	6	4	6	2	1	3	2	3	27
Human/Social Services	19	93	19	134	9	55	7	47	383
Public Administrative Assistant/Services	11	16	9	28	3	9	7	22	105
Urban Professional Assistant	3	16	4	20	0	6	0	10	59
Legal Assistant	4	18	8	57	2	20	3	41	153
Social Services Aide	6	55	2	22	4	12	1	19	121
Gerontology	2	2	2	4	0	1	3	1	15
PUBLIC SERVICES CERTIFICATES	4	9	5	30	0	6	1	10	65
LIBERAL ARTS AND SCIENCES/GENERAL STUDIES									
Liberal Arts and Sciences	576	864	665	1,795	199	318	261	461	5,139
General/Liberal Studies	617	645	698	1,196	164	212	327	468	4,327
Certificate Offerings	3	5	5	3	2	0	1	2	21
Special/Non-Degree/Non-Matriculated Student	477	350	1,801	4,086	15	39	127	204	7,099
GRAND TOTALS	3,116	4,435	4,616	10,114	974	1,728	1,753	2,740	29,476

KWE:ys

[10]Table and Figure numbers relate only to this reference and should not be included in the total numeralization of this report.

Connecticut Regional Community Colleges
General Fund: Enrollment by Curriculum

FALL 1979

Program Offerings	FRESHMAN FULL-TIME Male	FRESHMAN FULL-TIME Female	FRESHMAN PART-TIME Male	FRESHMAN PART-TIME Female	SOPHOMORE FULL-TIME Male	SOPHOMORE FULL-TIME Female	SOPHOMORE PART-TIME Male	SOPHOMORE PART-TIME Female	Grand Total
BUSINESS AND COMMERCE									
General Business - Career	111	49	124	104	42	39	83	48	600
General Business - Transfer	38	17	33	24	29	18	35	38	232
Accounting	181	263	213	310	79	112	126	248	1,732
Business Administration	320	197	352	348	114	59	202	151	1,743
Marketing and Distribution	86	67	64	85	33	34	56	27	452
Business Management	143	78	257	248	32	23	121	77	979
Secretarial Sciences/Studies	1	63	0	76	0	12	0	29	181
Executive Secretarial	2	303	2	221	0	84	2	122	736
Legal Secretarial	1	128	1	51	1	38	0	37	257
Medical Assistant	0	78	1	38	0	38	0	26	181
Bilingual Secretarial	0	6	0	5	0	2	0	1	14
Medical Secretarial	0	104	0	75	0	32	1	38	250
Junior Secretarial	0	6	0	3	0	2	0	3	14
Cable Television	12	2	5	3	7	1	0	0	30
Media Associate	29	20	12	25	8	10	10	11	125
Motel-Motel Management	20	8	3	7	12	4	8	3	65
Food Service Management	20	14	6	14	11	6	9	6	86
Applied Arts	14	10	6	9	6	7	4	10	66
Industrial Supervisor	0	0	4	0	0	0	0	0	4
BUSINESS AND COMMERCE CERTIFICATES	2	47	10	109	2	7	1	19	197
DATA PROCESSING TECHNOLOGIES									
Data Processing	82	111	94	148	27	33	92	70	655
Computer Programming	0	0	3	4	0	0	1	1	9
HEALTH SERVICES AND RELATED TECHNOLOGIES									
Dental Hygiene	0	14	0	8	0	12	1	8	43
Medical Laboratory Technician	1	13	2	19	5	20	3	17	80
Radiation Technology	3	11	1	4	3	17	0	9	48
Radiologic Technologist	1	15	2	7	2	18	7	19	71
Nursing	12	141	7	135	26	150	16	153	640
Occupational Therapy Assistant	0	18	0	7	2	14	3	9	53
Surgical Technician	3	12	0	1	3	7	3	13	42
Respiration Therapy	12	17	2	3	4	23	8	8	77
Mental Health Worker	4	29	3	19	1	8	0	8	72
Developmental Disabilities Aide	2	10	1	8	1	7	1	11	41
Occupational Safety and Health Admin.	6	3	9	9	0	3	15	6	51
Dietetic Technician/Nutrition	4	23	3	19	1	6	0	5	61
Dental Assistant	1	22	0	0	0	15	0	0	38
Occupational Safety and Health Admin. - Cert.	2	0	2	4	0	0	1	0	9
MECHANICAL AND ENGINEERING TECHNOLOGIES									
Aviation Maintenance	3	0	3	0	0	0	2	0	8
NATURAL SCIENCE TECHNOLOGIES									
General Agriculture	11	6	0	0	3	4	2	3	29
Environmental Science/Technology	5	1	5	0	2	6	6	3	28
Environmental Health Aide	0	0	3	0	1	0	1	0	5
PUBLIC SERVICES AND RELATED TECHNOLOGIES									
Educational Associate	0	33	1	19	0	12	0	12	77
Child Care	9	155	2	118	5	50	2	56	397
Early Childhood Education/Development	8	146	5	129	2	44	6	65	405
Library Technical Assistant	1	6	1	23	1	1	1	15	49
Correctional Services	5	11	2	6	4	2	6	6	42
Law Enforcement	127	32	83	43	52	22	92	26	479
Criminal Justice	85	40	43	17	36	18	72	12	323
Physical Education and Recreation	14	21	6	9	15	20	6	10	101

The graduating class of 1979 numbered 3,251; the degrees awarded in various programs numbered:[11]

a. 998 (31%) Business, Commerce, Data Processing
b. 470 (15%) Health Services and Paramedical
c. 41 (2%) Natural Science
d. 469 (15%) Public Service
e. 753 (23%) General Studies
f. 521 (14%) Liberal Arts and Science

(61% of all degrees were awarded in occupational areas)

Table one statistically presents a survey of those who graduated from all 12 community colleges in 1979. All 3,252 graduates received a Follow Up Survey from the community college central office. Forty-seven percent responded for a total sample of 1,547 graduates.

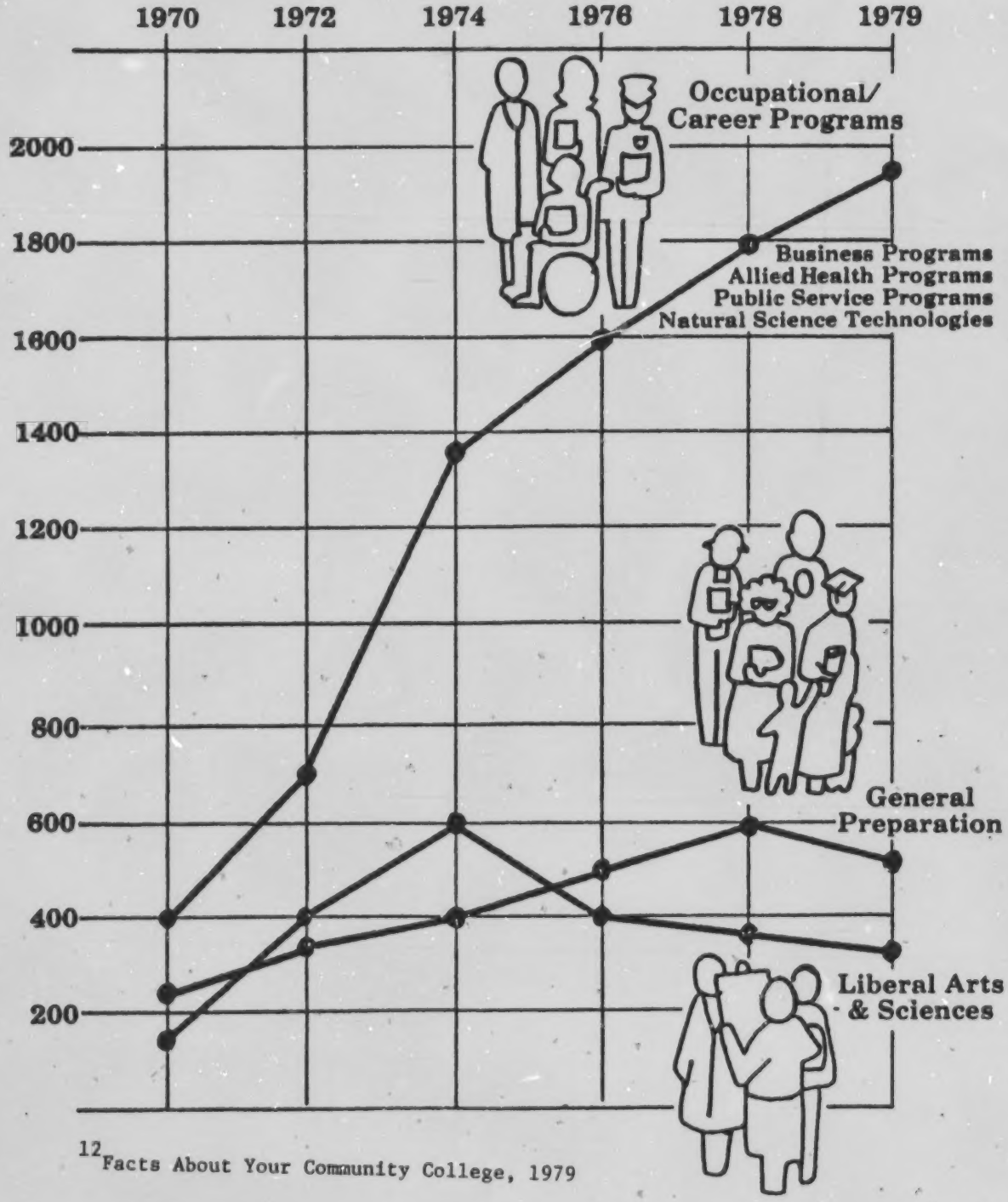
[11] Report of Degrees Awarded 1968-69 to 1978-79 Connecticut Regional Community Colleges.

FIGURE 7 [12]

CONNECTICUT REGIONAL COLLEGES

Graduates by Curriculum 1970-79

Total Graduates 1978-79 - 3,251



[12] Facts About Your Community College, 1979

TABLE 1

1979 Graduate Follow-Up Survey Of
Connecticut Community College Students By Program

	Business	Health	Public Service	General Studies/ Liberal Arts
Employment Status				
Employed part-time	6.3	16.2	9.2	6.7
Employed full-time	53.2	56.4	47.6	33.1
Employed and Educated	26.5	16.7	23.1	30.0
Continuing Education	11.3	6.4	11.7	22.6
Unemployed	2.0	3.4	4.8	3.6
Unavailable for Employment	.06	1.0	3.7	4.0
Self Employed				
Yes	4.6	1.1	2.8	5.0
No	95.4	98.9	97.2	94.7
Do you Hold a Job While Attending Your Community College				
Yes	52.4	20.5	40.7	56.1
No	47.6	79.5	59.3	43.9
Relationship Between Your Job and College Major				
Directly Related	50.6	84.8	50.9	14.0
Indirectly Related	33.6	8.7	25.0	45.7
Not Related	15.9	6.5	24.1	40.3
Reason Job Not Related to Major				
Preferred Another Field	14.7	18.1	15.0	13.3
Could Not Find a Job In Major Field	20.2	25.0	41.3	10.5
Better Paying Job In Another Field	7.3	18.8	12.5	9.4
Not Sufficiently Qualified in Major	10.1	25.0	8.8	7.2
Remained at Same Job Held at Community College	47.7	12.5	22.5	59.7

	Business	Health	Public Service	General Studies/ Liberal Arts
Did your Program at the Community College Assist you in:				
Increasing Theoretical Understanding				
a) Yes	77.6	93.5	71.2	45.5
b) No	9.9	.5	12.2	20.3
c) Not Applicable	12.5	6.4	16.6	34.2
Ability to Perform Job Skills				
a) Yes	72.9	88.7	65.9	42.4
b) No	14.3	5.4	15.9	23.7
c) Not Applicable	12.9	5.9	18.1	33.9
Obtaining Your Job				
a) Yes	44.2	78.3	41.7	23.7
b) No	35.4	13.6	32.3	39.9
c) Not Applicable	20.4	8.2	26.0	36.4

The Health Care Category showed 56.4% of those who graduated as being employed full-time; (see Table 1) 16.2% employed part-time and 16.7% employed and educated. 6.4% responded that they were continuing their education. Only 3.4% were unemployed. The surveys shows that 78.3% of those responding answered "yes" to the question, "Did your program at this community college assist you in obtaining your job?" Most (79.5%) did not hold a job while attending their community college. About 1/4 of those who felt their major was unrelated to their job (6.5%) cited their inability to find a job in their major field as the reason. 93.5% responded that their program increased their "Theoretical Understanding" of the content and 88.7% believed the program enhanced their ability to perform job skills.

Business graduates showed the smallest rate of unemployment (2%) of the groups responding. 86% were employed full or part-time while 11.3% opted to continue their education. A majority (50.6%) claimed that their job and college major were directly related; 33.6% said their job and major were indirectly related. The "not related" category had 15.9% responses. Most business graduates held a job (52.4%) while attending their community college; 7.5% retained those jobs after graduation. Only 3.1% could not find a job in their major field(s). Business graduates agreed (77.6%) that their program increased their theoretical understanding of content. 72.9% agreed that their ability to perform job skills was hightened by their community college program. Only 44.2% claimed that their program assisted them in finding a job, however, 20.4% claimed that the item was not applicable to them and 35.4% answered "no" to the question.

Most business graduates (88%) found some relationship between their degree and the job they held. Health Care graduates (95%) showed a direct or indirect relationship between degree and job, 75% for Public Service graduates and 59% for General Studies graduates.

The Public Service graduates had a rate of unemployment equalling 4.8%. Graduates employed full-time numbered 47.6%, part-time 9.2%, employed and pursuing an education 23.1%. Most did not hold jobs while in college (59.3%). The bulk of respondents, 75.9% (50.9% directly related), (25% indirectly related) saw a positive relationship between their job and college majors for those who worked at a job not related to their major, 9.95% claimed they could not find a job in their field while 10% preferred to remain at the job they held while in college.

Most agreed (71.2%) that their program increased their theoretical understanding and ability to perform job skills (65.9%). Only 41.7% responded that their program assisted in obtaining a job, 32.3% said it did not and 26% answered "not applicable".

Forty percent of General Studies graduates found no relationship between their job and their degree, 16% for Business graduates, 6% for Health graduates and 24% for Public Service.

There does not appear to be a significant difference in the unemployment rates as a function of degree programs.

Findings

1. Women make up a clear majority of community college students.

2. Students come for job entry skills but also for job enrichment programs.

3. The age of the average students is older than 22, requiring services that usually differ from those of the younger student.

4. Most students who entered in the Fall of 1979 did so for vocational reasons.

5. Limited course offerings have caused students to alter their vocational programs (especially in the advanced courses).

6. Poor physical facilities and the temporary nature of some colleges have the potential to limit the delivery capabilities of vocational programs.

7. The majority of vocational graduates who responded to the 1979 graduate survey follow up (1547) are employed on a full time basis. (Table 1).

8. The majority of vocational graduates responding were employed in work directly related to their college major. (Table 1)

9. The majority of vocational graduates responding believed that their education increased their theoretical understanding of their jobs. (Table 1)

10. The majority of vocational graduates responding stated that their college program enhanced their ability to perform job skills. (Table 1)

11. The majority of vocational graduates responding claimed that their program assisted them in obtaining a job. (Table 1)

12. Students found present jobs unrelated to their college major because: (Table 1)

    a. They remained at the same job held while attending enrichment exploratory community college (Business - 7.58% of respondents)

    b. They could not find a job in their major field (Health - 3.2%); They were not sufficiently qualified in their major (Health-3.2%)

    c. They could not find a job in their major field (Public Service-9.95%)

13. Jobs requiring special training (e.g. Health) showed a direct relationship between education and employment.

14. Jobs requiring semi specific training (e.g. Retailing) showed an indirect relationship between degree and employment.

15. Jobs requiring no special skills showed no relationship between degrees and employment.

16. Largest number of community college graduates (General Studies Degree) found jobs <u>without</u> a specialized degree. (Table 1)

Student Attitudes

Eight items dealing with student attitudes related to services and environments appropriate to vocational education were selected; data from 1977-79 were compiled for comparison and measure. These items were chosen because of their specific importance to vocational students. It should be noted that these responses came from not only graduates of vocational programs but from the total population who responded.

Findings

1. It was significant that 79.9% of the respondents in 1979 had no experience with the Placement Office at their college while only 14% claimed they were satisfied with this support service (see Table 2). These figures raise some rather interesting questions:

   a. Is a placement office really a necessary service? The rate of unemployment among all 1979 graduates is only 13.2%. (i.e. 86.8% came to school having a job or found jobs through their own efforts).

   b. Are students underemployed as a result of not using a placement office? A study should be originated to determine whether or not graduates are underemployed. Effective job placement could lead to better jobs commensurate with educational background.

2. It was interesting to note a real decrease in dissatisfaction with career/vocational counseling. In 1978, 26% of those responding were dissatisfied or highly dissatisfied; in 1979 only 15% made this judgement.

3. Seventeen percent (162 graduates) were dissatisfied with the instructional equipment available. If one looks at the continually shrinking budgets of community colleges (see appendix-CC-1979) coupled with a decreasing trend in the 'satisfaction' with instructional equipment by students, which is complicated by a quicker rate of obsolescence of in-house equipment, it should be obvious that community colleges explore the possibility of entering into dual enrollment programs with business and industry. Students would learn in a Cooperative Work Experience program and have access to greater quantities of new equipment.

TABLE 2

A Comparison of Community College Student Attitudes Relating
To Selected Services and Environments
Appropriate to Vocational Education
1977 - 1979[13]
(Expressed as a % of respondents)

	Highly Dissatisfied	Dissatisfied	Satisfied	Highly Satisfied	No Experience
Admissions Advisement					
1977	4	12	70	14	28
1978	4	14	65	17	-
1979	3	12	50	13	22
Career/Vocational Counseling					
1977	6	18	65	11	46
1978	7	19	59	15	-
1979	4	11	30	9	46
Quality of Major Courses					
1977[14]	2	8	68	22	32
1978	2	7	50	41	-
1979	2	7	49	34	9
Developmental/Remedial Courses					
1977	N/A	N/A	N/A	N/A	N/A
1978	2	6	78	15	-
1979	1	2	18	4	75
Library Facilities					
1977	4	10	70	16	21
1978	4	14	62	20	-
1979	3	14	60	17	7
Instructional Equipment					
1977	5	13	70	12	50
1978	4	14	62	20	-
1979	3	14	60	17	7
Job Placement Office					
1977	9	18	63	10	-
1978	13	24	43	20	-
1979	3	4	10	4	79
Overall Experience at College					
1977	2	6	75	18	10
1978	1	3	62	34	-
1979	1	3	61	31	4

[13]Connecticut Community College Graduate Survey, 1977,78,79.
1977-N=710, 1978-N=1640, 1979-N=1547

[14]Referred to as "Occupational Courses"

CHAPTER TWO

Labor Market Needs Compared To Community College Offerings

This section deals with the statistics which compare average annual employment needs for a labor market area with the number of graduate degrees awarded in individual programs of community colleges serving that area. Findings and conclusions will relate to the advisability of present curriculum offered at each community college. Additionally, recommendations for curriculum considerations will be offered based on employment trends enumerated in this "Findings" section.

(Special note should be made that this report does not suggest that specific curriculum be developed for specific job titles because of employment availability. Rather it is our contention that employment trends in various occupational categories be observed and extrapolated to serve as a basis for future curriculum considerations.)

TABLE 3

CONNECTICUT REGIONAL COMMUNITY COLLEGES
REPORT OF DEGREES AWARDED
1974 - 79

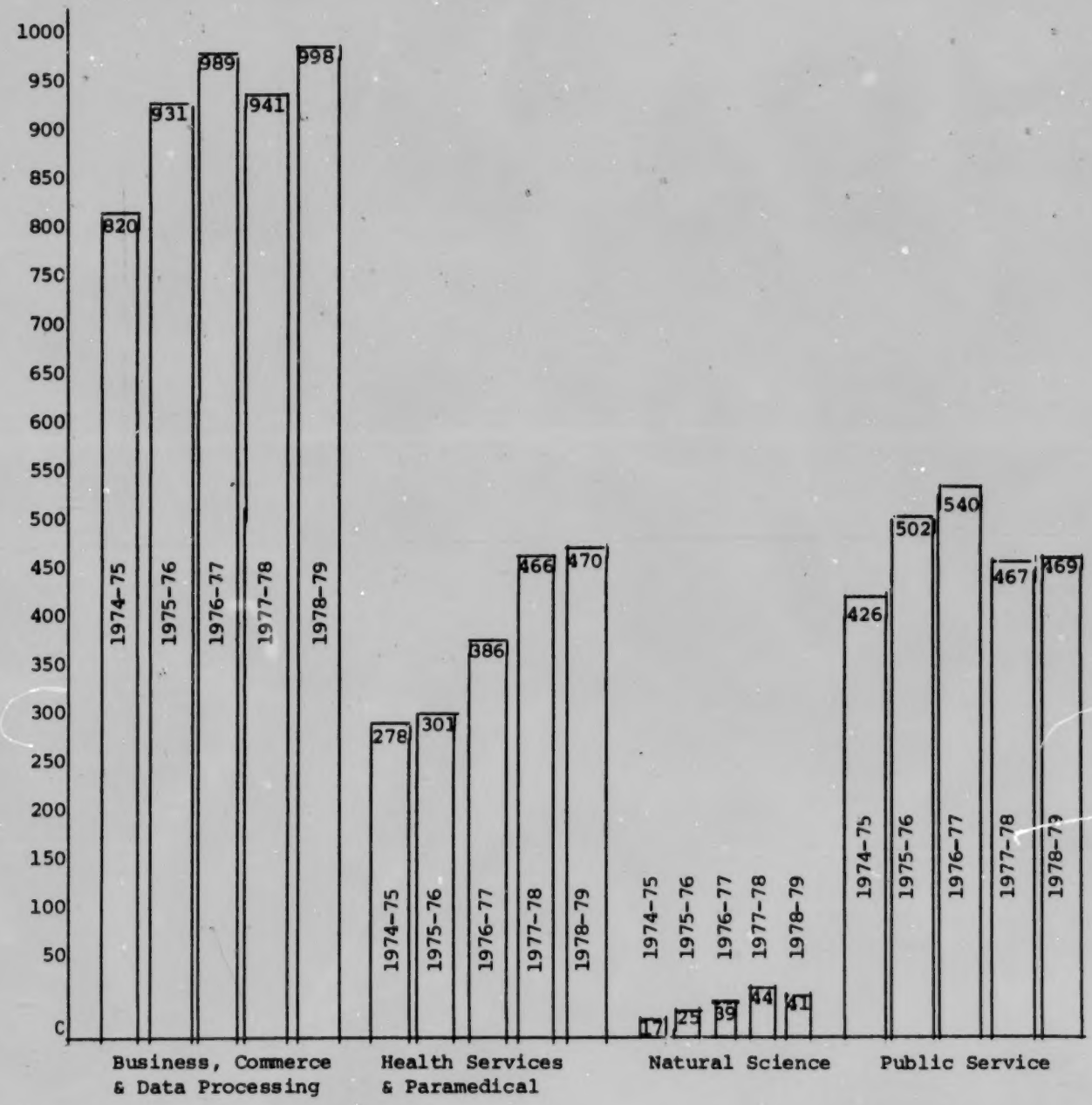
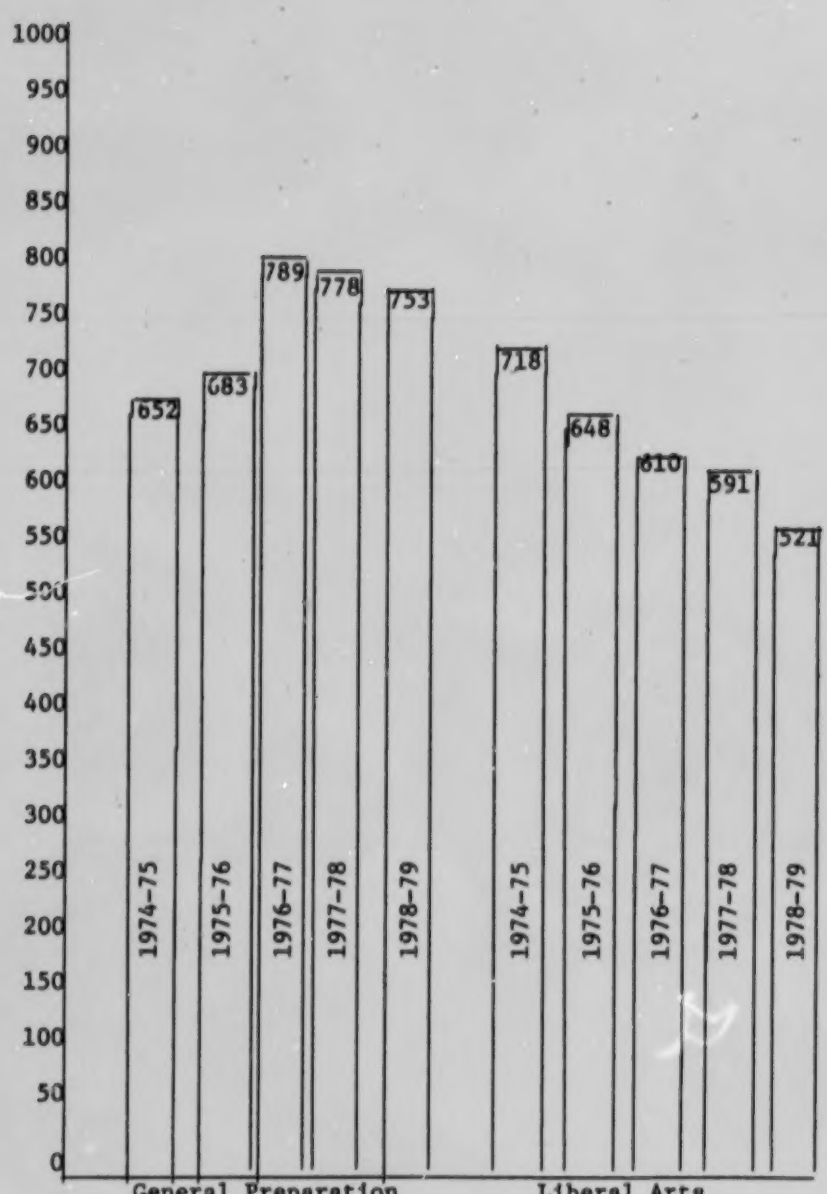


TABLE 3
(Continued)

CONNECTICUT REGIONAL COMMUNITY COLLEGES
REPORT OF DEGREES AWARDED
1974 - 79



Projected Worker Needs By Occupation
Compared to Degrees Awarded In Vocational Curriculum

Labor Market Area: Hartford

Community Colleges Servicing the Area: Greater Hartford, Manchester, Tunxis, Asnuntuck

Tables: 4-6

The annual employment statistics for the year 1979 showing the greatest demand for workers are in the Business Administration, Secretarial-Executive, Steno/Clerk/Typist, Marketing & Distribution areas. The average annual employment growth rate (due to separations and growth in the occupation) is 50 times greater in Business Administration, 23 times greater in Executive-Secretarial and 390 times greater for Steno/Clerk/Typist positions than community colleges are graduating. The Marketing and Distribution area has jobs available to graduates at the rate of 200 to 1! We are not suggesting that community colleges should fill all jobs available in the work place, or that more degree programs be developed in Business however, the statistics do point to very obvious trends in employment needs.

There were other statistics which point out a decreasing need for specific jobs. For example, in 1979 community colleges awarded 48 degrees in Medical and Transcriptionist-Secretarial; the statistics show an annual demand of 40 jobs. Child Care-Preschool Teachers graduates numbered 49 although only 20 jobs were projected as being available. Job enrichment may be considered as a new thrust in these areas.

Health Service occupations offer the most openings in the medical lab technician area, Registered Nurse area, and Correctional Services area. Public Administration Assistants were in somewhat of a demand (i.e. 30 openings for 1 graduate). Administrative Public Services showed an annual need for 70 workers; the number of graduates in 1979 was 1.

TABLE 4

Projected Worker Needs By Occupation In The Greater Hartford Labor Market Area As Compared To Degrees Awarded In Vocational Curriculum By Greater Hartford Community College, Manchester Community College Tunxis Community College, Asnuntuck Community College

	Average Annual Employment (1980 - 1984) (Due To Growth And Separations)	Community College Degrees Awarded 1979
I. Business, Commerce, Data Processing		
Accounting	190	64
Broadcasting	30	10
Business Administration	3630	71
Computer Science/Data Processing	120	56
Food Service Administration	410	34
Graphic Design	70	3
Marketing & Distribution	1820	9
Mass Communication	N/A	N/A
Media Associate	120	10
Secretarial-Executive	990	43
Secretarial-Legal	80	17
Secretarial-Medical & Transcriptionist	40	48
Secretarial-Bilingual	N/A	1
Steno/Clerk/Typist	390	0
II. Health Services		
Medical Lab Technician	120	26
Developmental Disabilities	N/A	12
Respiration Therapy	N/A	36
Occupational Therapy Assistant	60	18
Surgical Technician	N/A	15
Nursing-Associate Degree	250	96
Administrative Public Service	70	1
Child Care-Preschool Teachers	20	49
Correctional Services	190	10
Drug & Alcohol Rehabilitation Counselor	N/A	7
Criminal Justice/Law Enforcement	80	34
Human Services (Welfare Service Aide)	30	30
Legal Assistant	N/A	16
Library Technical Assistant	30	7
Public Administration Assistant	30	1
Teacher Aide	20	0
Cook & Barber	220	N/A
III. Natural Science Technologies		
Aviation Maintenance	40	0

[15] Annual Planning Information, FY 1980, Greater Hartford, Connecticut Labor Dept.

TABLE 5

Projected Employment Changes In The Greater Hartford Labor Market Area[16]
1974 - 1985
Employment Statistics Appropriate To Existing Vocational
Programs In Area Community Colleges
(Greater Hartford Community College, Manchester Community College,
Tunxis Community College, Asnuntuck Community College)

JOB TITLE[17]	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Business, Commerce, Data Processing				
Accounting				
Accountants	140	23	260	192
Broadcasting				
Artists & Entertainers	60	10	70	14
Business Administration				
Managers, Owners, Proprietors	3590	598	2870	574
Personnel, Labor Relations	140	23	140	28
Data Processing/Computer Programming				
Computer Specialists	470	78	440	88
Food Service Administration				
Bartenders[18]	290	653	790	153
Cooks, Executives	900	150	230	46
Graphic Design	90	15	190	38
Marketing & Distribution				
Buyers, Sales, Loan Managers	880	146	940	188
Sales Workers	1840	306	2040	408

[16] IBID

[17] Majors offered in affected community colleges are used as occupational categories.

[18] It is assumed that a per cent of those employed in this area are responsible for administrative skills.

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Mass Communication	N/A	N/A	N/A	N/A
Media Associate				
Author	-20	-3	20	4
Public Relations	50	8	30	6
Editors & Reporters	110	18	100	20
Photographers	50	8	20	4
Secretarial-Executive	2450	408	1990	398
Secretarial-Legal	230	38	220	44
Secretarial-Medical & Medical Transcriptionist	140	23	50	10
Secretarial-Bilingual	N/A	N/A	N/A	N/A
Secretarial-Transfer	N/A	N/A	N/A	N/A
Steno/Clerk/Typist				
Stenographers	-90	-15	-10	-2
Typists	560	93	610	122
II. Health Services				
Medical Lab Technician				
Clinical Lab Technician	470	78	230	46
Developmental Disabilities	N/A	N/A	N/A	N/A
Respiration Therapy	N/A	N/A	N/A	N/A
Occupational Therapy Assistant	140	23	50	10
Surgical Technician	N/A	N/A	N/A	N/A
Nursing				
Practical Nurses	460	80	190	38
Nurse Aides	610	101	130	26
Registered Nurses	640	106	80	16

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
III. Public Services				
Administrative Public Service				
Urban & Regional Planners	20	3	10	2
Assessors, Controllers of Local Public Administrations	10	1	10	2
Officials, Administration	10	1	60	12
Postmasters and Mail Supervisors	0	0	0	0
Health Administrators	190	31	60	12
Construction Inspectors	10	1	10	2
Child Care				
Preschool Teachers	30	5	-40	-8
Correctional Services				
Guards	-40	-6	-20	-4
Drug & Alcohol Rehabilitation	N/A	N/A	N/A	N/A
Criminal Justice/Law Enforcement				
Police & Detectives	260	43	150	30
Human Services	N/A	N/A	N/A	N/A
Legal Assistants	N/A	N/A	N/A	N/A
Library Technical Assistant				
Librarians	10	1	-60	-12
Library Assistants	40	6	-80	-16
Public Administration Assistant				
Public Administrators and Assistants	270	45	140	28

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Teacher Aide	50	8	-40	-8
Cook and Baker				
Baker	30	5	0	0
Cook	900	150	230	46
IV. Natural Science Technologies				
Aviation Maintenance	-120	-20	160	32

The Labor Department projects worker needs in the Greater Hartford Labor Market area for the following occupations, (see Table 4) preparation for which is not currently available at community colleges:

TABLE 6

TITLE	PROJECTED AVERAGE ANNUAL WORKER NEEDS (1980-84)
Chemical Lab Technician	40
Radiologic Technician	20
Public Administrators	160
Office Machine Operators	90
General Clerical Workers	2370
Food Service Workers	950
Health Service Workers	430

and others.

(Note: Greater Hartford and all subsequent "Projected Average Annual Worker Needs" were calculated by subtracting community college graduates in that job title from the labor statistics.)

Labor Market Area: Bridgeport

Community College Servicing the Area: Housatonic

Tables: 7-9

The vocational areas showing the greatest potential for employment are Business Administration/Management with 830 openings projected annually, Marketing and Distribution, 660 openings projected annually, Secretarial-Executive (390 openings) and Secretarial-Clerk (910 openings). Hotel and Food Service Management showed an annual growth of 50 employees while correctional services growth equalled 90. Those obtaining degrees awarded in each of these areas or in indirectly related areas could be easily absorbed into the labor market.

Projected worker needs in the Bridgeport area for occupations (see Table 8) where preparation is not presently being offered include:

TABLE 7

TITLE	Projected Average Annual Worker Needs (1980-84)
Registered Nurses	120

TABLE 7
(Continued)

TITLE	PROJECTED AVERAGE ANNUAL WORKER NEEDS (1980-84)
Computer Specialists	30
Legal Secretaries	40
Clerical Workers	860
Food Service Managers and Workers	130

TABLE 8

Projected Worker Needs By Occupation In The Bridgeport Labor Market Area As Compared To Degrees Awarded In Vocational Curriculum By Housatonic Community College[19]

	Average Annual Employment (1980 - 1984) (Due To Growth And Separations)	Community College Degrees Awarded 1979
I. Business, Commerce, Data Processing		
Accounting	70	20
Business Administration/ Management	830	34
Marketing & Distribution	660	7
Secretarial-Dental	20	7
Secretarial-Executive	390	2
Secretarial-Clerk	910	6
Hotel & Food Service Management	50	0
II. Health Services		
Medical Lab Technician	20	13
Occupational Safety & Health	N/A	4
III. Public Service		
Child Care	30	12
Law Enforcement	30	15
Correctional Serivces	90	2
Drug & Alcohol Rehabilitation Counselor	N/A	1
Urban Assistant	N/A	10

[19] Annual Planning Information, FY 1980, Bridgeport, Connecticut Labor Department.

TABLE 9

Projected Employment Changes In The Bridgeport Labor Market Area[20]
1974 - 1985
Employment Statistics Appropriate To The Existing
Vocational Programs At Housatonic Community College

JOB TITLE[21]	1975-1980 ENTIRE PERIOD	1975-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
I. Business, Commerce, & Data Processing				
Accounting				
Accountants	50	10	40	10
Bookkeepers	0	0	60	10
Business Administration				
Managers, Officials, and Proprietors	480	80	490	100
Management				
Other Managers, Proprietors[22]	450	70	550	110
Marketing & Distribution				
Buyers, Sales, Loan Managers	480	80	490	100
Sales Workers	160	30	770	150
Certified Professional Secretary				
Secretaries, Other	890	150	730	150
Steno/Clerk/Typist				
Stenographers	-20	0	-10	0
Typists	120	20	140	30
Billing Clerks	50	10	50	10
Small Business Administration	N/A	N/A	N/A	N/A

[20] IBID
[21] Majors offered in affected community colleges are used as occupational categories.
[22] Restaurant, Cafe, Bar Managers noted in "Hotel/Motel Administration".

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Hotel/Motel Administration				
Food Service Workers	1210	200	600	120
Restaurant, Cafe, Bar Managers	110	20	30	10
II. Health Services				
Medical Lab Technician				
Health Technology and Technicians	210	40	140	30
Occupational Safety and Health	N/A	N/A	N/A	N/A
III. Public Service				
Child Care				
Preschool, Kindergarten	-30	0	-30	0
Correctional Services				
Guards	-10	0	-20	0
Criminalistics/Law Enforcement				
Police & Detectives	30	10	90	20
Drug & Alcohol Rehabilitation	N/A	N/A	N/A	N/A
Labor Studies				
Personnel, Labor Relations	60	10	40	10
Library Technical Assistant				
Library Assistants, Attendants,	0	0	-10	0
Librarians	-10	0	-10	0
Security & Loss Prevention	N/A	N/A	N/A	N/A

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Urban Professional Assistant				
Health Inspectors	60	10	20	5
Public Construction Inspectors	40	10	60	10
Administrative Officials	20	0	40	10
Recreation Managers	60	10	30	10

Labor Market Area: New Haven

Community College Servicing the area: South Central Community College

Tables: 10-12

The curriculum presently offered having the greatest employment potential are Accounting, Business Administration and Secretarial Sciences. Accounting offers an average annual (1980-84) employment growth of 80, the Business Administration/Managers areas have 820 openings; Executive Secretarial slots number 450 while Steno/Clerk/Typist claim 150 projected average annual openings. South Central Community College graduated 21 in Business Administration and seven in Executive Secretarial. None graduated in the Steno/Clerk/Typist area. The Public Service area graduates number 20 in Child Care for an annual employment demand of 30. Also, 14 degrees were awarded in the Social Service Aide program; the job potential is 30 per year.

The following job categories were identified in the Greater New Haven area (See Table 11) as having a significant demand in the years 1980-85. Presently, there is no curriculum available for preparation in these areas:

TABLE 10

TITLE	PROJECTED AVERAGE ANNUAL WORKER NEEDS 1980-84
Other Managers, Officials, Proprietors	432
Buyers, Sales, Financial Managers	454
Computer Specialists	72
Food Service Workers	180

TABLE 11

Projected Worker Needs By Occupation In The New Haven Labor Market Area[23] As Compared To Degrees Awarded In Vocational Curriculum By South Central Community College

	Average Annual Employment (1980 - 1984) (Due To Growth And Separations)	Community College Degrees Awarded 1979
I. Business, Commerce, Data Processing		
Accounting	80	0
Business Administration/ Management	820	21
Computer Programming/ Data Processing	30	12
Secretarial-Executive	450	7
Secretarial-Legal	40	3
Secretarial-Medical	20	0
Steno/Clerk/Typist	150	0
II. Health Services		
Radiation Technologist	N/A	20
Radiation Therapy	N/A	2
Nuclear Medicine	N/A	2
III. Natural Science Technologies		
Food Service Administration	N/A	22
IV. Public Service		
Child Care	30	20
Drug & Alcohol Rehabilitation Counselor	N/A	2
Social Service Aide	30	14

[23] Annual Planning Information, FY 1980, New Haven, Connecticut Labor Department.

TABLE 12

Projected Employment Changes In The New Haven Labor Market Area
1974-1985 [24]
Employment Statistics Appropriate To The Existing
Vocational Programs At South Central Community College

JOB TITLE[25]	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
I. Business, Commerce, & Data Processing				
Business Administration				
Accountants	-70	-11	130	26
Managers, Officials, Proprietors	880	146	990	198
Other Managers, Officials, Proprietors	340	56	540	108
Buyers, Sales, Financial Managers	440	73	430	86
Computer Programming				
Computer Operator, Peripheral equipment	30	5	30	6
Computer Specialists	130	21	90	18
Secretarial-Executive				
Secretarial-Other	800	133	790	158
Secretarial-Legal	140	23	140	24
Secretarial-Medical	80	13	40	8
Steno/Clerk/Typist				
Stenographers	-20	-3	-20	-4
Typists	240	40	180	36
Billing Clerks	50	8	40	8

[24] IBID

[25] Majors offered in affected community colleges are used as occupational categories.

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
II. Health Services				
Radiation Therapy Technologist	10	1	10	2
Other Health Technology	90	15	70	14
III. Natural Science Technology[2]				
IV. Public Service				
Child Care				
Preschool, Kindergarten	-20	-3	10	2
Drug & Alcohol Rehabilitation	N/A	N/A	N/A	N/A
Human Services (Social Service Aide)				
Social Workers	50	8	50	10
Social Service agency Personnel	N/A	N/A	N/A	N/A

[2]Included in "Other Health Technology - specific figure not available.

Labor Market Area: Waterbury

Community College Servicing the area: Mattatuck Community College

Tables: 13-15

Table 13 shows Business Administration/Management average annual demand for workers as 690; the college graduated 4. Marketing and Distribution reflect annual employment needs at 700; the college graduated 17. The need for Executive Secretaries was listed as 200 per annum; graduates totalled 20. There is an outstanding demand for 560 clerical workers. No certificates were awarded in this area in 1979. Mattatuck filled half the projected employment demands for Registered Nurses (i.e. 35 out of 70).

There were occupations which showed a growth pattern which did not match the number of graduates in that program; Child Care, whose annual employment rate is 10, had 43 people graduate in that discipline, also Law Enforcement/Criminal Justice graduated 30 where the employment demand was listed at 20. It must be pointed out, however, that those graduating in the aforementioned program could have (pure conjecture on my part) taken the course of study for job enrichment or job mobility purposes.

Jobs showing the greatest potential for employment are enumerated in Table 15:

TABLE 15

TITLE	PROJECTED AVERAGE ANNUAL WORKER NEEDS (1980-84)
Business Administration	690
Marketing and Distribution	700
Clerical Certificate	560

TABLE 13

Projected Worker Needs By Occupation In The Waterbury Labor Market Area[26] As Compared To Degress Awarded In Vocational Curriculum By Mattatuck Community College

	Average Annual Employment (1980 - 1984) (Due To Growth And Separations)	Community College Degrees Awarded 1979
I. Business, Commerce, Data Processing		
Accounting	30	22
Business Administration/ Management	690	4
Marketing & Distribution	700	17
Secretarial-Executive	200	20
Secretarial-Legal	20	8
Secretarial-Medical	20	15
Clerical-Certificate	560	0
II. Health Services		
Mental Health Worker	N/A	11
Nursing	70	35
Radiologic Technologist	0	12
III. Natural Science		
Environmental Science	N/A	0
Agriculture Science	20	11
IV. Public Service		
Child Care	10	43
Drug & Alcohol Rehabilitation Counselor	N/A	4
Human Services (Social Service Aide)	N/A	2
Law Enforcement/Criminal Justice	20	30
Legal Assistant	N/A	8

[26] Annual Planning Information, FY 1980, Waterbury, Connecticut Labor Department.

TABLE 14

Projected Employment Changes In The Greater Waterbury Labor Market Area[27]
1974 - 1985
Employment Statistics Appropriate To The Existing
Vocational Programs at Mattatuck Community College

JOB TITLE[28]	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
I. Business, Commerce, Data Processing				
Accounting	-80	0	0	0
Management				
Managers, Officials, Proprietors	430	70	460	90
Personnel, Labor Relations	140	20	30	10
Marketing & Distribution				
Buyers, Sales, Loan Managers	260	40	220	40
Sales Workers	260	40	580	120
Secretarial-Executive	410	70	340	70
Secretarial-Legal	50	10	50	10
Secretarial-Medical	40	10	20	0
Clerical-Certificate				
Other Clerical Workers	690	120	720	140
II. Health Services				
Mental Health Worker	N/A	N/A	N/A	N/A

[27] IBID

[28] Majors offered in affected community colleges are used as occupational categories.

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Nursing				
Practical Nurses	230	40	130	30
Registered Nurses	140	20	100	20
Radiologic Technologist	20	0	10	0
III. Natural Science				
Environmental Science				
Foresters, Conservationists	0	0	0	0
Equine Science	N/A	N/A	N/A	N/A
General Agriculture				
Farm & Farm Workers	-30	0	-20	0
Farm Supervisors, Laborers	-40	0	-40	0
IV. Public Service				
Child Care				
Prekindergarten Teacher	10	0	0	0
Drug & Alcohol Rehabilitation	N/A	N/A	N/A	N/A
Human Services (Social Service Aide)				
Welfare Service Aide	10	0	10	0
Other Service Aides	N/A	N/A	N/A	N/A
Law Enforcement/Criminal Justice				
Police & Detectives	90	20	10	0
Legal Assistant	N/A	N/A	N/A	N/A
Security & Loss Prevention	N/A	N/A	N/A	N/A

Labor Market Area: Stamford

Community College Serving the area: Norwalk Community College

Tables: 16-18

The vocational areas showing the greatest potential for employment are Business Administration, 579 jobs, and Marketing and Distribution, 586 jobs. Executive Secretarial positions offered 312 jobs. (See Table 17)

The Labor Department projects worker needs in the Stamford Labor Market Area for the following occupations, (See Table 16) preparation for which is not currently available at this community college:

TABLE 16

TITLE	PROJECTED AVERAGE ANNUAL WORKER NEEDS 1980-84
Computer Specialists	30
Corrections Officer (Guards)	50
Sales Workers	480
Restaurant Managers	30

TABLE 17

Projected Worker Needs By Occupation In The Stamford Labor Market Area[29] As Compared To Degrees Awarded In Vocational Curriculum By Norwalk Community College

	Average Annual Employment (1980 - 1984) (Due To Growth And Separations)	Community College Degrees Awarded 1979
I. Business, Commerce, Data Processing		
Accounting	60	36
Business Administration/* Management	640	61
Marketing & Distribution	600	14
Secretarial-Executive	320	8
Secretarial- Legal	40	3
II. Health Services		
Registered Nurses	50	51
Respiration Therapy	10	6
III. Public Service		
Child Care	10	16
Law Enforcement	20	8
Library Technical Assistant	N/A	4
Recreational Leadership	10	12
Social Service Aide	10	6
Legal Assistant	N/A	7

[29] Annual Planning Inforamtion, FY 1980, Stamford, Connecticut Labor Department

* 24 Were Transfer Degrees

TABLE 18

Projected Employment Changes In The Stamford Labor Market Area
1974 - 1985[30]
Employment Statistics Appropriate To The Existing
Vocational Programs At Norwalk Community College

JOB TITLE[31]	1974-1980[32] ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
I. Business, Commerce, Data Processing				
Accounting	100	16	40	8
Bookkeepers	50	8	20	4
Business Administration				
Managers, Officials, Proprietors	2220	370	720	144
Other Managers, Officials, Proprietors	1570	261	390	78
Data Processing				
Computer Specialists	140	23	50	10
Marketing & Distribution				
Buyers, Sales, Loan Managers	610	101	290	58
Sales Workers	1270	211	500	100
Mass Communication	N/A	N/A	N/A	N/A
Secretarial-Executive				
Stenographers, Typists Secretaries	3400	566	1700	340
Traffic & Transportation				
Expeditors	90	15	40	8
Shippers	90	15	30	6
Transport Operatives	330	55	120	24

[30] IBID

[31] Majors offered in affected community colleges are used as occupational categories.

[32] Numbers will differ slightly from "Degree Comparison Sections" Due to the rounding off of decimals.

JOB TITLE	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
II. Health Services				
Nursing	100	16	60	12
Respiration Therapy	40	6	30	6
III. Public Service				
Child Care				
Preschool Teachers	0	0	0	0
Drug & Alcohol Rehabilitation	N/A	N/A	N/A	N/A
Human Services (Social Service Aide)				
Welfare Service Aides	10	1	10	2
Law Enforcement/Criminal Justice				
Police & Detectives	70	11	40	8
Legal Assistant	N/A	N/A	N/A	N/A
Library Technical Assistant				
Library Attendants, Assistants	10	1	-10	-2
Recreational Leadership				
Recreation Workers	30	5	20	4

Labor Market Area: Balance of State*

Community Colleges servicing the area: Middlesex, Mohegan, Northwestern, Quinebaug Community Colleges

Tables: 19-21

The following job classes showed a real demand for workers (from Table 14)

TABLE 19

TITLE	PROJECTED AVERAGE ANNUAL WORKER NEEDS (1980-84)
Business Administration/ Management	2198
Marketing and Distribution	1670
Secretarial-Executive	880
Steno/Clerk/Typist	200
Registered Nurses	219
Law Enforcement/Criminal Justice	230
Government Service	229

*Note: This labor market area is too broad to be useful for analytical purposes. It's inclusion in this report is, at best, an attempt to reflect employment trends and nothing more.

TABLE 20

Projected Worker Needs By Occupation In The Balance of State[33] Labor Market Area[34] As Compared To Degrees Awarded In Vocational Curriculum By Middlesex Community College, Mohegan Community College Northwestern Community College, Quinnebaug Community College

	Average Annual Employment (1980 - 1984) (Due To Growth And Separations)	Community College Degrees Awarded 1979
I. Business, Commerce, Data Processing		
Accounting	140	53
Business Administration/ Management	2260	62
Computer Programming/ Data Processing	50	9
Marketing & Distribution	1690	20
Real Estate	130	0
Cable Television	N/A	9
Secretarial-Executive	910	30
Secretarial-Legal	40	15
Secretarial-Medical	70	20
Steno/Clerk/Typist	200	0
Medical Assistant	N/A	14
II. Health Services		
Nursing	270	51
Mental Health Worker	N/A	21
Radiologic Technologist	30	7
III. Natural Science Technologies		
Environmental Health Aide Technician	N/A	8
IV. Public Service		
Child Care	50	18
Drug & Alcohol Rehabilitation Counselor	N/A	6
Law Enforcement/Criminal Justice	260	30
Government Service	230	1

[33] Should be used to show very general trends only.

[34] Annual Planning Information, FY 1980, Balance of State, Connecticut Labor

TABLE 21

Projected Employment Changes In The Balance Of State* Labor Market Area[35]
1974 - 1985
Employment Statistics Appropriate To Existing Vocational
Programs In Area Community Colleges
(Middlesex Community College, Mohegan Community College,
Northwestern Community College, Quinnebaug Community College)

JOB TITLE[36]	1974-1980 ENTIRE PERIOD	1974-1980 AVERAGE ANNUAL	1980-1985 ENTIRE PERIOD	1980-1985 AVERAGE ANNUAL
Business, Commerce, Data Processing				
Accounting	-20	0	260	50
Business Administration/ Management				
Managers, Officials, Proprietors	2380	400	2910	580
Other Managers, Officials, Proprietors	1200	200	1460	290
Computer Programming				
Computer Specialists	130	20	170	30
Marketing & Distribution				
Buyers, Sales, Financial Managers	940	160	1250	260
Sales Workers	2070	350	1030	210
Real Estate				
Appraisers	30	10	40	10
Brokers	-180	-34	160	30
Cable Television	N/A	N/A	N/A	N/A
Secretarial-Executive				
Secretarial-Other	1680	280	1870	370

*Note: Except for a "feel" for the trend, the Balance of State figures are relatively unusable to interface with Community College vocational planning. Balance of State represent too divergent a picture, geographically.

[35] IBID

[36] Majors offered in affected community colleges are used as occupational categories.

JOB TITLE	ENTIRE PERIOD	AVERAGE ANNUAL	ENTIRE PERIOD	AVERAGE ANNUAL
Secretarial-Legal	100	20	100	20
Secretarial-Medical	170	30	220	40
Steno/Clerk/Typist				
Stenographer	-10	0	-20	0
Typists	40	10	320	60
Medical Secretary & Assistant	N/A	N/A	N/A	N/A
II. Health Services				
Nursing	190	30	290	60
Mental Health Worker	N/A	N/A	N/A	N/A
Radiologic Technologist	80	10	70	10
III. Natural Science Technologies				
Environmental Health Aide Technician				
Health Inspector	140	20	130	30
IV. Public Service				
Child Care				
Prekindergarten Teacher	170	30	-10	0
Drug & Alcohol Rehabilitation	N/A	N/A	N/A	N/A
Law Enforcement/Criminal Justice				
Police & Detectives	230	40	30	10
Government Service				
Assessors, Local Public Administrators	10	0	40	10
Construction Inspector	20	0	10	0

Table 22 shows the relationship between the total numbers of those graduating in a particular program from community colleges, secondary and vocational/technical schools, and other institutions of higher education with the "Average Annual Worker Needs" totals. Business Administration continues to be an area requiring additional curriculum in-puts. Registered Nurses, Law Enforcement, Marketing and Distribution all show significant short falls in the supply of graduates. Table 23 supports these findings by pointing out significant surpluses and shortages in the areas mentioned previously.

TABLE 22

A Comparison Of The Number Of Degrees Awarded From Connecticut's Community Colleges[37] And The Projected Average Annual Worker Needs (1974-85)[38]

		Average Annual Projected Worker Needs (1974 - 1985) (Due To Growth And Separations)	Community College[37] Degrees Awarded (1978 - 1979)	Secondary[40] School Graduates (1979)
I. Business, Commerce & Data Processing				
Accounting		510	184	
Business Administration/ Management		12,470	220	
Managers, Officials, Proprietors	7,360			
Other Managers, Officials & Proprietors	5,110			
Computer Science/Data Processing		240	N/A	
Marketing & Distribution		6,120	67	674
Buyers, Sales, Loan Managers, Bank Financial Managers	1,550			
Other Sales Workers	4,570			
Secretarial-Dental		N/A	26	
Secretarial-Executive		3,330	120	
Secretarial-Legal		280	56	
Secretarial-Medical		190	83	
Secretarial-Bilingual		N/A	4	
Secretarial-Clerk		1,040	6	4129
Billing Clerk	180			
Clerical Supervisor	10			
File Clerks	190			
Payroll Clerks	220			
Receptionists	450			
Medical Assistant[39]		N/A	83	
Cable Television Technician		N/A	9	

[37] Vocational Graduate Follow Up Survey, 1978-79 (Numbers include Secondary, Vocational/ Technical Schools and special programs at the secondary level)

[38] Connecticut Annual Planning Information, FY 80, CT Labor Department

[39] Other Medical Assistant tallies were unavailable.

[40] Business and office catagory lumps job entry clerical and business graduates.

	Average Annual Projected Worker Needs (1974 - 1985) (Due to Growth And Separations)	Community College Degrees Awarded (1978 - 1979)	Secondary School Graduates (1979)
Media Associate		10	
Hotel & Food Service Manager		35	
Traffic & Transportation	N/A	3	
Graphic Design		3	
II. Health Services			49[37]
Dental Hygene	1,990	22	
Medical Lab Technician	440	39	
Radiologic Technician	80	39	
Radiation Therapy	N/A	2	
Nuclear Medicine	N/A	2	
Nursing (Associate Degree)	890	244	
Occupational Therapy Aide	N/A	18	
Surgical Technician	N/A	15	
Medical Records Technician	40	0	
Respiration Therapy	N/A	41	
Mental Health Worker	N/A	32	
Occupational Safety & Health Aide	N/A	4	
Developmental Disabilities	N/A	12	
III. Natural Science Technologies			
Agricultural Science	220	11	
Farm Manager 10 Farm Owners & Tennants 210	-	-	205
Food Service Administrator (Dietetic Technician)	20	19	
Community Health Aide (Environmental)	230	8	
Health Administrators 230			

		Average Annual Projected Worker Needs (1974 - 1985) (Due To Growth And Separations)	Community College Degrees Awarded (1978 - 1979)
IV. Public Service			
Child Care (Prekindergarten Teachers)		120	138
Library Technical Assistant		100	17
Law Enforcement		300	145
Police & Detectives	250		
Sheriffs & Bailiffs[3]	50		
Correctional Services		570	12
Guards	570		
Drug & Alcohol Rehabilitation Counselors		N/A	12
Recreation Leadership		140	19
Park Management		N/A	7
Physical Education		N/A	1
Therapeutic Recreation		N/A	7
Human Services Curriculum (Social Service Aide)		90	59
Welfare Service Aides	90		
Community Organization Technician (Urban Assistant)		N/A	11
Public Administration Assistant		N/A	2
Legal Assistant		N/A	31

[3]Openings due to separations only.

TABLE [illegible]

Partial Analysis of Manpower Needs and Jobs in State[41]
Employment Opportunities Related To Vocational Education Programs
Labor Demand and Supply Summary
State of Connecticut

Instructional Programs	Labor Demand FY 1982##	Projected Supply and Demand for Fiscal Year Ending September 30, 1982: Vocational Ed. Output*** FY 1982##	Other Sectors Output# FY 1982##	Net Difference (Demand minus Supply) FY 1982##
TOTAL	329,800	104,935	44,260	
Agriculture	1,970	1,350	*	620
Agriculture Production	-940	425	*	-1,365
Off-Farm	2,910	925	*	1,985
Distributive	57,720	7,100	4,080	46,540
Retailing & Marketing	33,510	6,940	705	25,865
Hotel & Lodging	1,770	115	160	1,495
Real Estate & Finance	9,050	0	1,530	7,520
Transportation	12,270	0	195	12,075
Other**				
Public Relation Specialist, Writers	150	0	*	150
Advertising Agents, Advertising Services Sales Persons	300	45	1,440	-1,185
Attendants, Recreation, Amusement	210	0	*	210
Attendants, Personal Service	260	0	*	260
Remainder	200	0	50	150
Health	27,030	10,710	650	*
Dental Assistant	2,360	310	240	1,810
Medical Lab. Assistant	1,070	550	110	410
Dental Lab. Technician	*	55	*	*
Mental Health Technician	*	110	*	*
Nursing	12,190	3,145	100	8,945
Surgical Technician	*	35	*	*

Source: [41] Employment Opportunities Related to Vocational Education Programs "1978-79 Five-Year and Annual State Plan For the Administration of Vocational Education" Connecticut Labor Department, 1978.

Instructional Programs	Labor Demand FY 1982##	Projected Labor Supply: Vocational Ed. Output*** FY 1982##	Projected Labor Supply: Other Sectors Output# FY 1982##	Net Difference (Demand minus Supply) FY 1982##
Occupational Therapy	*	125	*	*
Radiologic Technician	700	190	*	510
Enviromental Health Technician	*	65	*	*
Inhalation Therapy	*	130	*	*
Other**				
Therapists	1,170	0	*	1,170
Health, Technologists, Tech.(Exc. Rad.)	990	0	*	990
Remainder	80	0	100	-20
Home Economics	15,540	3,660	1,570	*
Child Care	2,800	1,395	620	785
Food Service	11,490	2,065	265	9,160
Office	109,430	55,000	19,870	34,560
Bookkeeping, Accounting	21,790	12,750	1,095	7,945
Data Processing	2,930	255	4,165	-1,490
Education Associate	960	105	*	855
Steno, Secretarial	30,940	12,845	4,815	13,280
Supv. and Adm. Management	10,990	1,385	30	9,575
General Office	26,290	27,660	9,385	-10,755
Other**				
Counter Clerk (Exc. Foods)	1,760	0	10	1,750
Estimators, Investigators, NEC	1,540	0	*	1,540
File Clerks	1,720	0	20	1,700
Library Attendants, Asst.	670	0	*	670
Receptionists	3,350	0	290	3,060
Statistical Clerks	1,590	0	*	1,590
Stock Clerks, Storekeepers	2,180	0	60	2,120
Telephone Operators	1,660	0	*	1,660
Expeditors, Prod. Controllers	1,060	0	*	1,060

Instructional Programs	Labor Demand FY 1982##	Projected Labor Supply: Vocational Ed. Output*** FY 1982##	Projected Labor Supply: Other Sectors Output# FY 1982##	Net Difference (Demand minus Supply) FY 1982##
Technical				
Police Science Technology	1,260	915	*	345

* Data not available.

** Includes supply and demand data which cannot be related specifically to approved instructional programs listed.

*** Includes only graduate data from vocational programs approved by the Division of Vocational Education (1975 Annual Follow-Up of Vocational Graduates Division of Vocational Education, State Department of Education).

\# Projected labor supply data were derived from existing Connecticut Labor Department training programs, Technical College Programs (that are not formally approved by the Division of Vocational Education) and from data supplied by the Bureau of Community and Adult Education on private schools, with the assumption that these output levels will prevail through fiscal year 1982. Excluded are estimates of training output from CETA Prime Sponsors in the Stamford and New Haven areas. Information from these areas was not available. The above labor supply and projections include only the listed sources. Any additional supply from other sources in not known.

FY 1982 data represents a cumulative five year figure for demand and supply, not just fiscal year 1982 data.

NOTE: "The above manpower demand and supply projections (from the Labor Department) should be viewed as median estimates under the stated economic assumptions on the basis of sampling error involved, it can be expected that the true value will fall within the range of ± 10% of the given value." (Connecticut Labor Dept)

NOTE: Annual Needs for Five-Year Plan
Supply and demand projections for FY 1982 are based on cumulative annual averages for each year of the five-year period beginning with FY 1978. Average annual needs for any given year of the period may be derived by taking one-fifth of the FY 1982 cumulative projections. Average annual net differences (goals) may be derived in the same manner.

Findings

1. There is and will be a shortage of qualified, college-trained personnel in the following areas statewide:
   a. The Distributive Occupations (See Table 23), especially Retailing and Marketing Management
   b. Health-Registered Nurses, Therapists, and some technologies (See Table 23)
   c. Business Administration/Management
   d. Secretarial-especially in the areas of Executive and Medical
   e. Computer Specialists
   f. Law Enforcement

2. New employment opportunities pertaining to community college curriculum are declining in most labor market areas for Corrections Officers, Public and Municiple Managers, Prekindergarten Teachers and Drug and Alcohol Rehabilitation Counselors.

3. Secondary schools and Vocational Technical schools provide significant in-put of workers trained in basic clerical skills, retail sales skills, and basic fashion designing. (See Appendix)

4. Community colleges are offering curriculum which is appropriate to local labor market demands.

5. Child Care programs are graduating students who are facing a shrinking job market.

6. General Studies and Liberal Arts graduates are finding jobs in the local labor market without completing a specific vocational degree program.

ONE

The number of jobs available in the Secretarial, Business Administration and Marketing sectors of our state's economy is staggering. Therefore, it is a recommendation of this report that: immediate consideration be given to increasing the total number of sections offered in Business Administration (i.e. Management, Accounting, Finance, Business Law), Secretarial Science (especially the terminology sections, i.e. Medical, Legal), Marketing (i.e. Sales, Retailing, Merchandising, Advertising).

TWO

Due to the decreasing financial support of Higher Education from both the Federal and State governments, alternative means should be considered to insure students a meaningful education, deliverable during this dilemma. Therefore, it is the recommendation of this report:

a. That an alternate system, one of self-directed learning; be established for the working student. Students could elect to learn on a contractual basis similar to a Cooperative Work Experience program. The parallel model of co-op education is especially appropriate to community college students since many seek job enrichment (24% of the entering class of 1979-Figure 1) as a reason for enrolling in vocational programs and/or classes. This arrangement, contractually speaking, could also be appropriate for Liberal Arts and General Studies students who desired vocational training without being committee to a program. The Liberal Arts and General Studies students would be accomodated with the existing numbers of sections (allowing for revision of total sections offered in each department.) This arrangement would also encourage vocational exploration by both the vocational and non-vocational student.

b. That interdisciplinary courses/curriculum which prepare groups of graduates like General Studies and Liberal Arts majors with an exposure to a variety of vocational skills be recommended. A strictly one-to-one relationship of degrees to jobs can serve to eliminate up to 37% of community college graduates (Liberal Arts and General Studies).

There are whole categories of jobs, for example in Business Administration (e.g. Personnel Generalist, Salesperson, Manager), Public Service (e.g. Child Care, Urban Assistant, Rehabilitation Counselor, Government Services) which may require some specific preparation but not a degree in that particular area.

c. That the granting of credit for experiential learning as a means of prompting students to upgrade their present skills or seek new skills be enacted. Table one shows that 75-80% of the Business, Health and Public Service Graduates saw a relationship between their jobs and their majors however, only 59.7% of the General Studies and Liberal Arts graduates could see the same relationship. Credit for experiential learning would also serve to increase enrollments in advanced vocational courses.

THREE

It is recommended that a redefinition of the criteria be initiated to measure the relative success of a program (ergo its funding). Presently, we measure the success of a vocational program in terms of the number of graduates who have graduated from a prearranged curriculum (as in this report). How do we know that the General Study or Liberal Arts graduate has not been able to obtain a job as a result of his/her community college education. Isn't it possible for a General Study graduate to have taken a program very similar to a Business Administration student and yet get a General Study degree? Definition of successful criteria should be based on course completions in vocational areas rather than more degrees. (The approach of this report is to interface projected jobs available in the labor market with the number of degrees that each program is turning out. Perhaps, that traditional approach needs to be reexamined.)

FOUR

Three years ago, the author did a study of people who had earned Bachelor's degrees but found it necessary to return to Community Colleges for marketable skills ("Educational Looping OR Why Four-Year College

Graduates Return To Community Colleges for Marketable Skills", ERIC, April, 1978). That study showed that Bachelor's and Master's degree holders came back to school, took two or three skills courses and returned to the workforce with a new job title. It is recommended that the feasibility study be made to determine if it is possible for the student with a Bachelor degree who might need a couple of occupational courses to get a particular job to be accommodated. There needs do not have to be met by an Associate degree program. This consideration is especially important in light of what sociologists tell us (i.e. that the average person changes jobs 5-7 times in their life). (It would be an interesting study to attempt to identify any particular patterns of career changes.)

FIVE

It is recommended that the function of a Translator be added to the structure of each Community College System. (Perhaps as a pilot program). Job titles and descriptions are being created with amazing speed. We must begin to rethink our approaches to the training of students. Elizabeth Koontz, past president of the NEA suggests that a new position be initiated in the schools - a Translator. Translators, she says, can serve as liasons between business or industry and the academic or intellectual communities. The Translator's function(s) would be to point out work issues not currently being addressed, such as personal needs that may interfere with productivity.[42] For example, Koontz says many women have problems dealing with the stress caused by the dual roles they are forced into (i.e. parent and bread winner). The

[42]Education and Work: Two Worlds or One? Change Magazine Press, New Rochelle, NY, p.35

Translator can help to alleviate this stress and the community college can use this information in the development of new curriculum and/or support services.

The Translator can act as a source of information to the community college in the translation of the meaning of labor market trends. The role of formal education and skill development will be blurred in the '80's if we are not more responsive. The training for specific skills could become more of a private, in-house project or subcontracted to commercial entrepreneurs because public education is too late in responding. The Translator can shorten response time.

SIX

That a study be made of the relative effectiveness of the Placement Offices at each community college. The small utilization of these offices must be investigated to ascertain the effects on student needs (as enumerated in this report).

SEVEN

That a needs assessment study be initiated to investigate the special precareer and career needs of women. The fact that 65% of the entering class of 1979 were women, the majority of which returned to school for vocational courses, requires special attention for effective, system-wide planning.

Project Design

Initially, this project was to have consisted of a series of questionnaires to former community college students, area employers, college personnel, local state employment offices et al.; however, after investigating the availability of surveys, literature and reports, it was discovered that the many divergent pieces necessary for this report were accessible. The task of doing primary research was judged inefficient and redundant, thus this method was abandoned. Instead, four different sets of source documents were employed to do this study: Connecticut Labor Department Studies, Community College Enrollment & Graduate Statistics, the State Master Plan and "Other" sources of information.

The first set of documents utilized came from the Connecticut Labor Department, Employment Securities Division.* The Division publishes a series of reports dealing with employment planning for six major labor market areas in the State: Hartford, Bridgeport, Stamford, New Haven, Waterbury, Balance of State, and Total State summary. Each publication documents: an Occupational Outlook Summary, Demographic Trends in Employment, an Economic Development Outlook, The Projected Employment Changes By Occupation, These publications were used in conjunction with current catalogs from the twelve community colleges in this manner:

1. Each of the twelve community college catalogs was investigated to ascertain the vocational curriculum offered (at each college).
2. Each community college population area of service was geographically matched to the appropriate labor market area. (note: geographic matching was based on the "areas of service" outlined in the Carnegie Commission Report)

*Note: See Bibliography

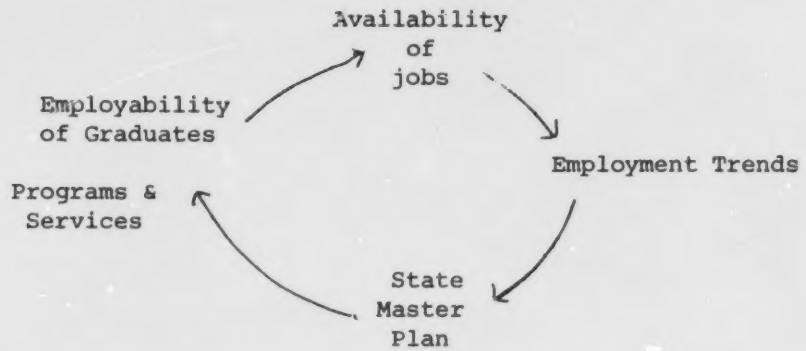
3. College programs and offerings were taken from each catalog as a base for identifying job titles in the Connecticut labor reports.

4. The number of projected employment changes in each labor market area (1974-80, 1980-85) were compared to identify trends in employment.

5. The average annual employment needs (due to growth and separations) were compared to the community college degrees awarded in each area in 1979.

6. The projected average annual worker needs were measured in each labor market area against the number of degrees awarded in each vocational program (by college, by system).

TOPICS INVESTIGATED
PROJECT DESIGN



The end result was: a comparison of the number of jobs available in each labor category to the number of graduates completing their work in the appropriate program. A comparison was made of future trends in employability and community college offerings.

The second document, The Master Plan For Vocational and Career Education, provided for the planning of vocational offerings and services in anticipation of future employment trends. Selected goal and recommendation statements, in relation to this study and applicable to community colleges, were lifted and measured against vocational offerings and services.

The third set of documents utilized an attitudinal survey of community college vocational graduates in 1979. Present employment status, vocational aspirations and reasons for enrolling were compared to the choice of major and the availability of jobs in that particular labor market. "College services provided" were measured to judge whether they were available to serve the needs of vocational students adequately. (Services like: Job placement, counseling, job advisement, et al., were used as criteria.) Students responses (i.e. satisfaction with program, assistance in increasing theoretical understanding, obtaining the job, increase ability to perform) were compared with respect to vocational aspirations.

The fourth set of documents included: readings in vocational education from journals, reports, newspapers. (see bibliography)

APPENDIX

Greater Hartford Community College
Accounting

Emphasis is placed on developing a basic understanding of accounting principles and theory with some introduction to highly specialized techniques. The student pursues specialized courses simultaneously with courses in the liberal arts.

Business Administration: Management

The Management curriculum seeks to provide the student with a basic knowledge of the administrative framework of modern business. The student is made aware of the basic tools needed for management decision-making, and is introduced to the specific functional areas of planning, organizing, motivating and controlling. At the completion of this program, a student will be qualified for a middle management position or further education leading to an advanced degree.

Manchester Community College
Marketing

The two-year Marketing program of study leads to the Associate in Science degree upon graduation. This program is for students who wish to enter managerial or proprietary positions in the marketing and distribution sectors of business. Students enrolled in the program will attain basic marketing concepts that will prepare them for employment in both marketing and sales.

Tunxis Community College
Marketing Management: Fashion Merchandising Option

This program provides training in the fundamentals of fashion design, consumer relations, retail planning, and marketing technique. It prepares students for entry level positions in fashion design, production, and retailing.

Housatonic Community College
Secretarial Science: Executive Secretary

The level of skill required in the two-year program leads to a secretarial position at the executive level. This includes a variety of duties, both administrative and secretarial, requiring a high degree of proficiency in typing, steno, and office procedures skills. Executive Secretarial program requires two years of shorthand with accompanying speed and accuracy.

Manchester Community College
Secretary or Clerk-Typist

The Secretary or Clerk-Typist program is a one-year program leading to a certificate of completion upon graduation. The program provides training in subjects which prepare students for employment as secretaries in business, industries and governmental agencies. Training is supplemented with courses in English, social studies, business and accounting to provide a foundation of general education, as well as skills upon which to build a career. A "secretary" certificate will be conferred upon students who complete a full year of shorthand or stenoscript. A "clerk-typist" certificate will be conferred upon students who complete the program without the courses in shorthand or stenoscript.

Greater Hartford Community College
Secretarial Science: Legal Secretary Option

The duties of a legal secretary vary considerably, depending on the kind of office the secretary works in, but all legal secretaries should be able to perform specialized tasks:

- Prepare time sheets indicating the time the attorney spends on behalf of different clients
- Prepare client's fee and disbursement statements
- Prepare appropriate documents for real estate, probate, corporate, tax, civil or criminal litigation, and domestic matters

Knowledge of legal terminology is essential to the secretary who plans on a legal secretarial career.

Secretarial Science: Medical Secretary Option

The duties of a medical secretary will vary from one doctor's specialty to another and within the confines of a hospital or clinic, but all medical secretaries, in addition to regular secretarial duties, should be able to perform such tasks as:

- Making appointments
- Quoting fees to patients
- Recording patients' charges and payments
- Sending out and collecting bills
- Transcribing medical histories
- Completing insurance forms
- Helping patients understand doctor's instructions regarding diet, prenatal care, exercises, etc.
- Checking medical journals for items of interest to doctor
- Proofreading doctor's articles, lectures, manuscripts
- Preparing records for doctor's use in court

Manchester Community College
Hotel-Motel Management

The Hotel-Motel Management program is a two-year program leading to the Associate in Science degree upon graduation.

In the first year, in addition to the general studies, students are

given a background in all the various aspects of the lodging industry and property management, including such things as housekeeping, maintenance, and front office procedures. In the second year an emphasis is placed on the actual management situations, including such things as budgeting, marketing, personnel management and actual problem-solving from a management standpoint.

Students are required to participate in an eight week, individually-planned work experience in the summer between the freshman and sophomore years. Pay and credit toward graduation are earned for this work.

South Central Community College
Data Processing

This career program offers training for immediate employment as a computer programmer or in other computer-related business occupations. The curriculum, developed in cooperation with the regional chapter of the National Alliance of Businessmen, is oriented toward the computer operations of the region's businesses and industries.

Students learn computer programming in their first semester of study and gain additional experience writing and testing computer programs through the computer practicum. Students are able to work directly with the computer hardware located in the college's data processing center, including a Harris Cope 1200 Remote Job Entry terminal connected to two IBM 370 model 168 computers at the University of Connecticut Data Processing Center in Storrs.

Manchester Community College
Food Service Management

The Food Service Management program is a two-year program leading to the Associate in Science degree upon graduation.

The food service industry, which ranks third in the nation, offers to graduates job opportunities in many areas where food and drink are served, including restaurants, clubs, schools, colleges, universities, resorts and hotels. Representative positions include assistant manager, purchasing service supervisor and many others dealing with the needs of people. Transfer opportunities into programs offering a bachelor's degree in hospitality education are available for students earning better than average grades.

Students are required to participate in an eight-week, individually-planned, 400-hour, work experience program. Pay and credit toward graduation are earned for this work. A doctor's physical examination is required of all students prior to enrolling in foods courses.

Tunxis Community College
Nursing

This program focuses on meeting the health needs of individuals with concern for health problems, and prepares the students for first level nursing positions in hospitals and community agencies. The program also provides a foundation for appropriate transfer to a Bachelor's degree program and the necessary background for writing the Registered Nursing (RN) licensing examinations.

Manchester Community College
Medical Laboratory Technician

A student in the program learns to perform general laboratory tests, such as blood sugar and hemoglobin determinations, under the supervision of a pathologist or a medical technologist. The student spends his first year on the college campus taking courses. The second year is spent in one of the hospitals affiliated with the program.

South Central Community College
Dietetic Technician

The dietetic technician with a major in nutrition care works under the supervision of a registered dietitian, public health nutritionist or a consultant dietitian. The dietetic technician functions as an active member of the dietetic team, who assist in assessing, providing, implementing and evaluating nutrition care to individuals and the community.

Radiologic Technology

The Radiologic Technology programs comprise three disciplines:

1. Diagnostic Radiologic Technology, using radiation to obtain an image (radiographic film) for diagnostic purposes.
2. Nuclear Medicine Technology, using radioactive materials to obtain an image (scan) for diagnostic purposes.
3. Therapeutic Radiologic Technology, using radiation for therapeutic purposes.

Mohegan Community College
Child Care

With the growing trend toward the care of young children outside of their homes, there has been a concurrent trend of concern regarding the quality of care these children receive.

The Child Care curriculum has been designed to serve as a guide for the preparation of individuals to work in a variety of roles in child care facilities. The specific purpose is to provide individuals with knowledge, understanding and skills needed to work effectively with children in various stages of development.

South Central Community College
Early Childhood Education: Teacher Aide

This one-year program provides an opportunity for those students who have not completed high school and are interested in working with young children to complete a one-year program and work as Teacher Aides in Day Care Centers, Nursery Schools, Head Start, and Kindergarten.

It also provides training for those students who are already employed and wish to improve their skills in working with young children.

These students will be qualified to assist the teachers and teacher assistants (composing a team) in a total program, guiding and supervising activities, including outdoor play, art, music, and health activities; field trips, and individual and group activities.

Students will not be trained to perform administrative duties, curriculum development or long range program planning, but because of their skills in supervision, knowledge of child development as well as routine duties, they can relieve the teacher for administrative duties.

Manchester Community College
Educational Associate

The Educational Associate program is a two-year program of study leading to the Associate in Science degree upon graduation. Students in the program will be prepared for employment in positions as teacher aides in elementary and secondary education. Schools hire such auxiliary personnel in order to free teachers to perform the professional tasks for which they were educated.

The work of a teacher aide is varied. Specific duties are usually established by each school. In general, teacher aides will assist individual students or small groups with learning activities, perform clerical work, maintain equipment and supplies, assist in the preparation of instructional materials, or oversee study halls, cafeterias and examinations.

Students spend one semester in the work experience segment of the curriculum. Here they learn to work with children, classroom teachers and school principals as they will when they become employed. The program is not intended as preparation for teaching in the public schools.

Media Associate

The Media Associate program is a two-year program leading to the Associate in Science degree upon graduation. The program was developed in consultation with area employers in the communications field, including radio and television broadcasting, public information, advertising, newspaper and periodical journalism, motion picture and still photography and others.

A student in the program learns to write professional quality copy for boradcast, to prepare presentation with various audio-visual aids, to write professional articles and press releases, to photograph subjects of journalistic interest and importance, and to process his film.

Manchester Community College
Law Enforcement

The Law Enforcement program is a two-year program leading to the Associate in Science degree. In addition, a one-year, concentrated program leading to a certificate is offered.

The Law Enforcement program offers the student an opportunity to prepare for basic police work and law enforcement. The associate degree program encourages both the rookie and the experienced officer to prepare for the challenging tasks of first line patrol and crime prevention in a career that normally will span a 20 to 25-year period. The program features a 'twin selctions' arrangement of courses that allows working police officers to attend courses regardless of which shift they may be working.

Graduates of the program may expect with experience, to advance into the ranks of superior officers. Or, they may continue their education toward a bachelor's degree or higher, and qualify for even greater possibilities of advancement. The courses in this program are transferable to four-year institutions where work can be undertaken toward an advanced degree.

The certificate option of the Law Enforcement program offers in-service police personnel a way to improve their career opportunities through academic study of law enforcement, political science and sociology. Identical courses are given in the morning and evening to accommodate changes in duty schedules.

Tunxis Community College
Criminal Justice: Law Enforcement Option

This program offers training in criminal law, criminal investigation, police community relations, and police administration. It prepares students for entry level positions in law enforcement and allows for upgrading of skills for those already employed in the field as well as for transfer to a Bachelor's degree program.

Criminal Justice: Correction Option

This curriculum in Correction has been designed to meet the needs of employed correctional agency personnel and the student who wishes a career in correction. The specialized courses offer the opportunity to explore the changing world of correction, its community programs of rehabilitation, and new skills required to work effectively with offenders.

Criminal Justice: Judicial Studies Option

This program provides a broad, general background in court administration and procedures. It prepares students for entry level positions in criminal justice as well as for transfer to a Bachelor's degree program.

South Central Community College
Human Services

The field of Human Services is a dynamic, challenging and new profession. The concept of human services stresses care for the whole individual and his/her relation to his/her environment. The sequential courses of study are designed to develop knowledge in personality patterns and behavior, roles and functions of community resources, and skills in the dynamics of interpersonal relationships, interviewing techniques and counseling. The course of study in each curriculum option provides training for employment in a variety of professional areas, including social agencies, community action programs, mental health centers, schools, health and welfare planning bodies, child care agencies, and elderly services agencies.

Tunxis Community College
Drug and Alcohol Rehabilitation Counselor

This program is designed to meet the needs of persons currently employed in drug and alcohol prevention and rehabilitation programs as well as students seeking to enter the field. This state wide program, offered by the Regional Community College System, is limited in size.

Housatonic Community College
Urban Professional Assistants

This program is designed to prepare qualified students for a wide variety of employment positions in the urban-suburban region of Greater Bridgeport and surrounding metropolitan areas. Career positions include such fields as social service, municipal government, regional planning, programs for senior citizens. Instruction is cross-disciplinary and designed for maximum transferability for those wishing to continue their studies.

Manchester Community College
Administrative Service

Administrative Service is offered as a two-year associate degree program or a one-year certificate program. The degree program is designed primarily for students who wish to pursue a career at the entry level of administrative service in local, state or federal agencies. For those public service careerists who wish to update their skills, a one-year certificate program is available.

The two-year degree program offers six specialized courses directly related to public administration and 14 liberal arts courses. During the last semester of the second year, students are required to participate in an individually-planned work experience with a public agency for one day each week of the semester. The work experience gives students an opportunity to observe theory and practice in actual situations and to test, at an early stage, the validity of their own career choices.

The one-year certificate program is designed for persons seeking short-term academic and in-service, professional development. It is usually restricted to those with extensive previous experience or an academic degree.

South Central Community College
General Education Curriculum

The Associate in Science degree will be conferred upon candidates who successfully complete a program within the General Education Curriculum that includes at least nine semester hours of credit in English, including composition and speech; six hours in mathematics and/or science; and twelve hours in social sciences. The General Education Curriculum provides a student with the broadest range of electives of any degree program offered by the college. It is particularly attractive to those who have not yet decided on a specific academic or vocational goal and to those who wish to structure a degree program to meet individual needs.

The General Education program does not necessarily prepare the student for any particular career; it does provide a borad general base on which students may build. Additional training may be necessary for students who then decide to pursue a particular career or specific program.

Manchester Community College
General Studies

The General Studies program is a two-year program leading to the Associate in Science degree. It provides the broadest range of electives of any degree program at the college. It allows a student to tailor a degree program to meet his or her individual needs. This curriculum may also be used for transfer purposes into specialized majors at some four-year colleges. Students are cautioned to check with counselors the requirements of the four-year colleges they plan to attend and select courses accordingly.

Tunxis Community College
General Studies

The wide range of electives available in the General Studies curriculum make it possible for the student who has not decided on a vocational or academic goal to explore various areas of study under the guidance of a Tunxis Community College advisor. With such advising, a student may create a program of study suitable as a foundation for transfer to a four-year college or to a university, or may concentrate gradually in a particular vocational area, or may choose only to take those courses of personal intellectual stimulation.

Greater Hartford Community College
Liberal Arts: Pre-professional Programs

Hundreds of Greater Hartford Community College students have transferred successfully to four-year institutions and graduate schools throughout the country. Students intending to transfer to a four-year institution of higher learning should use the services of the Counselors Office as soon as possible. Those who have a specific institution in mind should make an early appointment with a counselor and bring a catalogue from the four-year institution with them to the conference. They should also consult faculty members in the departments related to their interests.

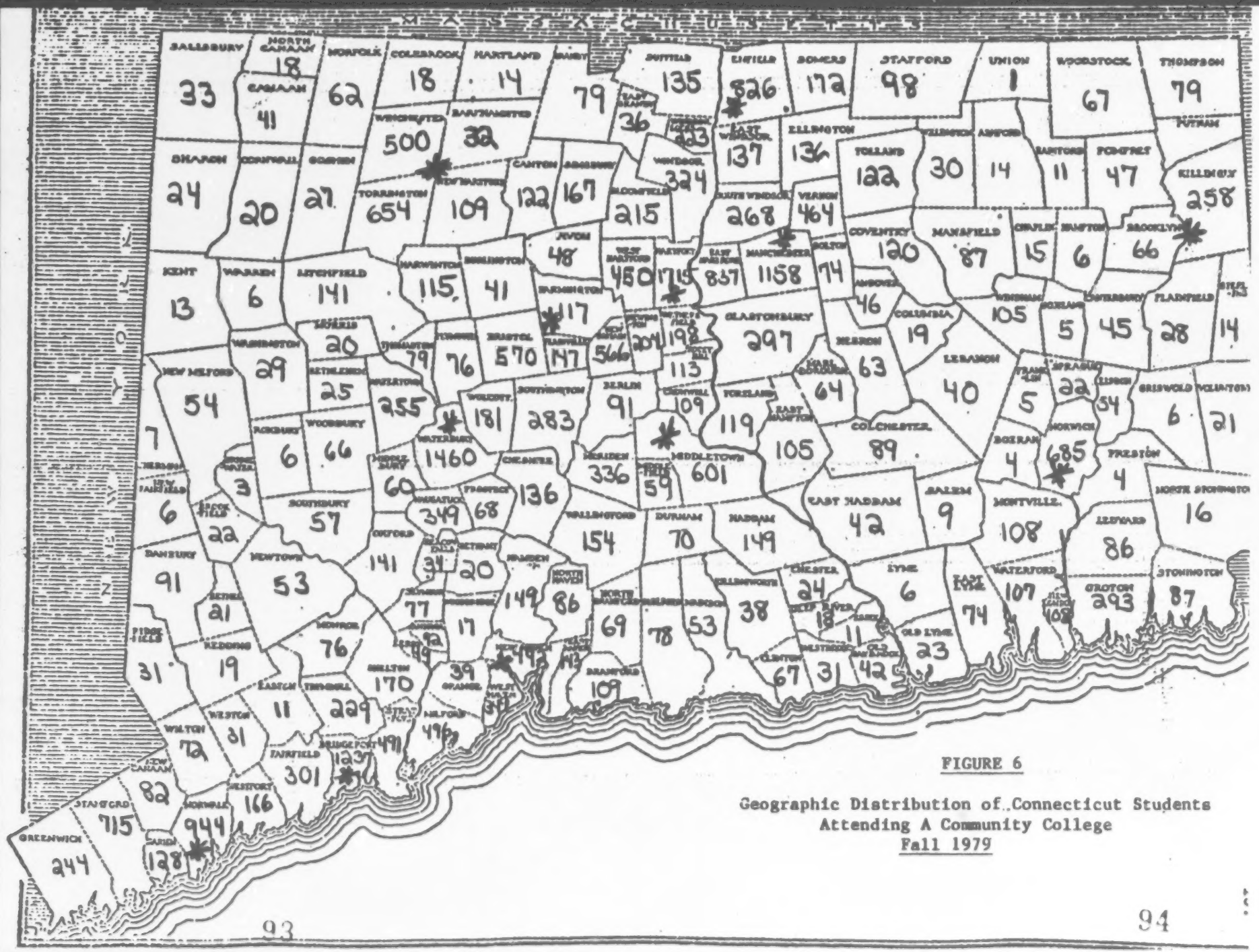


FIGURE 6

Geographic Distribution of Connecticut Students
Attending A Community College
Fall 1979

1978 Graduates of Vocational Technical Secondary Schools
By Labor Market Area In Selected Curriculum[43]

Hamden - Whitney		
	Fashion Design	26
Hartford - Prince		
	Fashion Design	40
New Britain - Goodwin		
	Fashion Design	26
Stamford - Wright		
	Fashion Design	16
Waterbury - Kaynor		
	Fashion Design	25
	TOTAL	133

[43] Vocational Technical Schools, October 1, 1979 Enrollments by Trade, By Racial/Ethnic Group and Sex (Only curriculum applicable to Community College study)

1977 Graduates of Vocational Technical Secondary Schools
Greater Hartford Labor Market
(Greater Hartford Community College, Manchester Community College,
Tunxis Community College, Asnuntuck Community College)

Towns	Vocational/Agricultural	Business/Office	Data Entry	Health	Child Care
Andover	-	-	-	-	-
Avon	-	13	-	-	-
Bloomfield	-	38	2	-	9[a]
Bolton	-	11	-	-	-
Canton	-	5	-	-	-
Colchester	-	25	-	-	-
Columbia	-	-	-	-	-
Coventry	-	4	-	-	-
East Granby	-	20	-	-	-
East Hartford	-	120	11	-	-
East Windsor	-	13	10	-	-
Ellington	-	29	-	-	-
Enfield	-	107	23	-	-
Farmington	-	13	4	-	-
Galstonbury	8	-	-	-	-
Granby	-	8	-	-	-
Hartford	-	169	15	-	-
Hebron (Regional H.S. #8)	-	5	-	-	-
Manchester	-	43	27	-	-
Marlborough	-	-	-	-	-
Newington	-	49	7	-	-
Rocky Hill	-	10	-	-	-
Simsbury	-	26	-	-	-
South Windsor	-	9	16	-	-
Somers	-	-	-	-	-
Stafford	-	34	-	-	-
Suffield	-	15	-	-	-
Vernon	10	53	-	-	-
West Hartford	-	22	9	-	-
Wethersfield	-	24	8	-	-
Willington	-	-	-	-	-
Windsor	-	44	17	-	-
Windsor Locks	-	26	9	-	-
American School for the Deaf	-	-	2	-	-
TOTALS	18	984	168	N/A	9

a Care and Guidance of Children

1977 Graduates of Vocational Technical Secondary Schools
New Haven Labor Market
(South Central Community College)

Towns	Vocational/Agricultural	Business/Office	Data Entry	Health	Child Care
ACES (New Haven)	-	-	-	-	-
Bethany	-	3	-	-	-
Branford	-	37	21	-	-
Clinton	-	7	-	-	-
East Haven	-	76	-	-	-
Guilford	-	4	-	-	-
Hamden	-	27	13	-	-
Madison	-	30	-		
New Haven	-	166	8	1[a]	2[b]
North Branford	-	17	-	-	-
North Haven	-	31	-	-	-
Orange	-	-	-	-	-
Wallingford	12	98	30	-	-
West Haven	-	67	5	-	-
Woodbridge (Regional H.S. #5)	-	55	-	-	-
Hamden-N.H. Coop Center	-	20	-	-	-
TOTALS	12	638	77	1	2

a Medical Lab Assistant
b Care and Guidance of Children

1977 Graduates of Vocational Technical Secondary Schools
Balance of State Labor Market
(Middlesex Community College, Mohegan Community College,
Northwestern Community College, Quinnebaug Valley Community College)

Towns	Vocational/Agricultural	Business/Office	Data Entry	Health[a]	Child Care
Balance of State	166	1576	147	-	37

a Programs applicable to occupations requiring community college degrees.

1977 Graduates of Vocational Technical Secondary Schools
Bridgeport Labor Market Area
(Housatonic Community College)

Towns	Vocational/ Agricultural	DWE[a]	Business/Office	Data Entry	Health	Child Care
Trumbull	9	-	19	2	-	-
Easton	-	-	-	-	-	-
Fairfield	-	-	36	-	-	-
Monroe	-	-	15	-	-	-
Shelton	-	-	40	10	-	-
Derby	-	-	25	-	-	-
Milford	-	-	51	6	9[b]	-
Stratford	-	-	41	-	-	-
Bridgeport	-	-	63	30	-	4[c]
Totals	9	-	271	48	9	4

a Those available for employment
b Ommitted-No sense of the types of jobs taken-applicable to study
c Care and Guidance of Children

1977 Graduates of Vocational Technical Secondary Schools
Waterbury Labor Market Area
(Mattatuck Community College)

Towns	Vocational/Agricultural	Business/Office	Data Entry	Health	Child Care
Beacon Falls	-	-	-	-	-
Bethlehem	-	-	-	-	-
Cheshire	-	28	-	-	-
Middlebury (Regional H.S. #15)	-	2	-	-	-
Naugatuck	-	18	19	-	-
Prospect (Regional H.S. #16)	-	5	-	-	-
Southbury	-	-	-	-	-
Thomaston	-	17	-	-	-
Watertown	-	15	9	-	-
Wolcott	-	32	14	-	-
Woodbury (Regional H.S. #14)	-	10	-	-	-
Waterbury	-	118	53	-	-
Totals	-	245	95	-	-

1977 Graduates of Vocational Technical Secondary Schools
Stamford Labor Market Ares
(Norwalk Community College)

Towns	Vocational/Agricultural	Business/Office	Data Entry	Health	Child Care
Darien	-	15	-	-	-
Greenwich	-	64	-	-	-
New Canaan	-	8	-	-	-
Stamford	-	328	45	-	-
Total	-	415	45	-	-

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